



STATE OF MEDICINE

IN

FRANCE, ENGLAND, AND GERMANY.

OBSERVATIONS
ON THE
COMPARATIVE STATE OF MEDICINE

IN
FRANCE, ENGLAND, AND GERMANY,
DURING A JOURNEY INTO THESE COUNTRIES IN THE YEAR 1835.

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PREFACE.

In the following work, founded on a residence of several months in Paris and London, a journey through England to Dublin, and a visit to the north of Germany in the year 1835, it is not my intention to present a complete account of the tour, or of the hospitals and other institutions of the cities visited. Enough of this kind of information is already to be found recorded by those who have preceded me: in the travels of Frank, for example, in 1805; of Andree, in 1810; of Haindorf, in 1815; of Wagner, in 1825; of Otto, in the same year; lastly and especially, of W. Horn, in 1832. Neither do I design to reproduce what may be found in more systematic treatises—as in Casper's "Characteristics of French Medicine," and "Contributions to Medical Statistics," which have appeared in 1822, 1825, and 1835; in Von Ammon's "Parallel of French and German Medicine," in 1823; in H. Kopp's "Medical Observations" for 1825; in Philip von Walther's "Remarks of a Traveller upon London;" in Graefe and Walther's *Journal* for 1832; in Dieffenbach's "Remarks in and upon Paris;" in Casper's weekly publication for 1835 and 1836. Nor, again, do I intend taking any notice of current medical intelligence, new remedies or instruments, remarkable cases, &c.; since, by means of translations, and of journals expressly devoted to that end, the reading community of Germany are constantly and promptly supplied with news of this description. My purpose is, besides presenting a few gleanings of recent facts of interest, to give such a compendious view of the state of national science in these different countries, as personal observation, combined with the publications of the day and with the history of the past, have enabled me to form. I have endeavoured to do this in such a manner, as not only to recount

single impressions made by particular objects, but to convey the combined effect of several—compounded, to use a professional simile, so as to produce a common result.

This work, therefore, is the product of my humble efforts to obtain a just notion of the state of medicine in the different countries I have visited ; and my hope is, that it may afford some aid to future travellers, and contribute to a just estimate of the comparative condition of science in the countries alluded to. My views will be found to be based upon facts, and these not lightly gathered either from hearsay or from books. Perhaps I may be excused for alluding to the difficulty of the task, and for confessing that I throw this essay before the public with some timidity. To all those whose attentions and kind offices have aided me in accomplishing the objects of my journey, I take this opportunity of renewing my expressions of regard and gratitude.

I will only add that a second visit to London, during the month of May of the present year, has afforded me an opportunity of visiting some new objects of interest, and of correcting my impressions of those already observed.

Hanover, July, 1836.

STATE OF MEDICINE

IN

FRANCE, ENGLAND, &c.

CHAPTER I.

TOPOGRAPHY OF PARIS AND LONDON.

PARIS.—Quartier Latin—Ecole de médecine—Lectures and professors—Hospitals and hospices—Clinics—Students—Concours—Foreign physicians.

LONDON.—Hospital—Schools—Management of these—Teachers—Pupils—Regulations for the examinations of surgeons and general practitioners in England, and curriculum of the medical faculty at Edinburgh—Climate and mode of life—Traveling physicians.

PARIS.

Paris is, as is commonly said, all France. This accounts for the fact of its immense population. This centralisation of the whole country in the capital is true also of medicine. Strasburg and Montpellier are the other distinguished medical schools, but the rivalry between the latter and Paris has long since ceased. The capital has the advantage both in point of resources and of activity.

Paris is divided from east to west by the river Seine. On the north side lie the theatres, the boulevards, the Louvre, the Tuilleries, the Champs Elysées, the Palais Royal. In the midst of the southern half is situated an old, somewhat narrow district, which, as being the resort of persons pursuing learned occupations, has long been styled "Pais," or "Quartier Latin." Here is the University of Paris, here are the Sorbonne, the Ecole de Droit, the Ecole Polytechnique, most of the "Colleges," and the Ecole de Médecine. On the left side is the still beautiful Quartier St. Germain; on the right is a lively but dirty district of mechanics and tradesmen; on the south is the Luxembourg, with its single large garden; and under the ground run the old catacombs, labyrinthic passages formed by nature, now filled with skulls and bones.

The school of medicine is in the rue de l'Ecole de Médecine, and in this street are also the Ecole Pratique, and the Hôpital de l'Ecole. Here are found medical booksellers, instrument makers, skeleton makers, and a medical reading room. The hospitals, however, excepting that just named, are for the most part at a distance and far apart.

The faculty of medicine of Paris consists of a dean (now Orfila) and twenty-five professors. The number of agregés is twenty-four; that of the students in 1836 was two thousand.

The school of medicine is a large building, containing a museum, a library, and a lecture room, capable of containing more than one thousand five hundred persons, and soon to be enlarged. Each professor lectures from twice to three times a week, and receives an income of ten thousand francs. The year is divided into two semesters. No private individual can teach or lecture without permission, which, however, is easily granted. The number of private courses is over sixty.

The lectures and professors are:—

Anatomy, Cruveilhier, (Physician to Salpêtrière, now Professor of Pathological Anatomy); *Physiology*, Bérard; *Medical Chemistry*, Orfila; *Medical Physics*, Pelletan; *Botany*, Richard; *Pharmacy*, Déyeux; *Hygiene*, Desgenettes; *Practical Medicine*, Andral (Physician to la Charité), Duméril; *Surgery*, Marjolin (Hôpital Beaujon), Gerdy (Hôpital St. Louis); *Operations and Bandages*, Richerand (Hôpital St. Louis); *Pathology and Therapeutics*, Broussais (of Vâl de Grâce Military Hospital); *Legal Medicine*, Adelon; *Obstetrics*, Moreau (Maternité Hospital); *Medical Clinics*, Chomel (Hôtel-Dieu), Rostan (Hôpital de l'Ecole), Fouquier (Charité), Bouillaud (Charité); *Surgical Clinics*, Jules Cloquet (Hôpital de l'Ecole), Velpeau (Charité), Roux (Hôtel-Dieu), Sanson (Hôtel-Dieu); *Obstetric Clinics*, Paul Dubois (Hôpital de l'Ecole).

The lectures commence at 10 o'clock, and continue in the same lecture room in regular succession till 5. Strangers are admitted gratuitously and without ticket.

With the school are connected two additional structures—one, the Ecole Pratique, situated opposite in the same street, containing several small lecture rooms, in which private courses are given, and four dissecting rooms; the other is Clamart, near the Jardin des Plantes, intended for dissection merely, consisting of four large halls, in each of which are about twelve tables, and which together accommodate two hundred and fifty students. Every one can take part in the dissection, but each subject supplies five students, and costs about six francs. All unclaimed bodies are brought out of the hospitals to one of the two places.

The hospitals are:—

1. Hôtel-Dieu, 1000 beds (Place Nôtre Dame). Here are received, as in the other hospitals, with the exception of the five to be last named, all the sick, excepting the insane, children, incurable, syphilitic, pregnant, and those suffering from chronic disease.

2. Hôpital de la Pitié, (Rue Copeau,) 600 beds.

3. Hôpital de la Charité, (Rue des S. S. Pères,) 300 beds.
4. Hôpital Cochin, (Rue du Faubourg St. Jacques,) 200 beds.
5. Hôpital St. Antoine, (Rue du Faubourg St. Antoine,) 250 beds.
6. Hôpital Necker, (Rue de Sévres,) 140 beds ; with a ward for the application of lithotripsy, attended by Civiale.
7. Hôpital Beaujon, (Rue du Faubourg du Roule,) 180 beds.
8. Hôpital des Enfants Malades, (Rue de Sévres,) 550 beds, for children of both sexes, from two to fifteen years of age.
9. Hôpital St. Louis, (Rue de l'Hôpital St. Louis,) 700 beds, especially devoted to cutaneous diseases, ulcers, and scrofula. Here are medical baths, including steam and sulphur baths.
10. Hôpital des Vénériens, (called Hôpital aux Capucins, or Hôpital du Midi,) Rue des Capucins, 650 beds.
11. Maison Royale de Santé, (Rue du Faubourg St. Denis,) 175 beds, devoted to the sick and wounded, who are here attended on payment of three to six francs per day.
12. Maison d'Accouchement, (or Maternité,) Rue de la Bourbe, 350 beds.

The ten hospices or asylums are :—

1. Hospice des Enfants Trouvés, (de l'allaitement,) Rue d'Enfer, 258 beds ; for the reception, nursing, and charge of foundlings.
- 2 and 3. Two hospices for old age ; the Salpêtrière for women, 5100 beds ; Bicêtre for men, 3200 beds.
- 4 and 5. Two hospices for incurables.
One for women and children, 525 beds, (Rue de Sévres.)
One for men, 455 beds, (Rue St. Martin.)
6. Hospice Larochehoucauld, 200 beds : asylum for those employed in the hospices.
7. Hospice des Orphelins, (Rue St. Antoine,) 750 beds—half for boys, half for girls—who are maintained till they grow up.
8. Institution of St. Péline, 175 beds : for the sick and weak of both sexes, who pay board.
9. Hospice des Ménages, (Rue de la Chaise,) 670 beds : for needy married persons above seventy, widows and widowers of sixty years.
10. Hospice St. Michel, 12 beds : for persons of seventy years of age.

The hospitals and hospices of Paris contain in all about 15000 beds. In this number are not included the four military hospitals, the Insane Hospital at Charenton, near Paris, the Institute for the Blind, &c. Of these institutions no one lies on the river except the Hôtel-Dieu, which is reckoned the most unhealthy ; whether for this reason is undetermined. (In London, also, there is no hospital on the Thames, with the exception of a marine asylum on board a vessel in the stream.)

All the above named institutions in Paris are under the direction of the Administration générale des Hôpitaux et Hospices de Paris, with a separate Bureau d'Admission aux Hospices. There are also a large number of benevolent institutions, which are not under

the same direction. The mean annual number of patients received in seven years, from 1819 to 1825, amounted to 47,166, or one to eighteen of the population of the city. The mean stay of a patient in the hospitals is thirty-five days; the mortality about one to 8.37. The income and expense amounted in 1833 to 10,186,388 francs.

The most useful institutions to the physician visiting Paris, are Hôtel-Dieu, Charité, the Hôpital de l'Ecole, Hôpital des Enfants, des Vénériens, and St. Louis. By consulting a guide-book, or plan of Paris, the reader can form to himself an idea of their various positions. Besides the four medical clinics of the professors of the university, as that of Chomel in Hôtel-Dieu, of Rostan in the Hôpital de l'Ecole, of Bouillaud and Fouquier in la Charité; besides the surgical clinics of Roux and Sanson in Hôtel-Dieu, Velpeau in La Charité, Jules Cloquet in the Hôpital de l'Ecole, and Blandin in La Pitié; and besides the obstetric clinic of Paul Dubois in the Hôpital de l'Ecole, there are some excellent clinics by physicians and surgeons not attached to the faculty, as by Lisfranc, Louis, and Piorry, in La Pitié. By clinics are meant the exposition and discrimination of the cases, which a physician or surgeon en chef delivers in the lecture room, after his regular round or service. Those who are especially followed during their visits, are Lugol, Bielt, Alibert, Gerdy, in the Hôpital St. Louis, Ricord in the Hôpital des Vénériens, Breschet, Magendie, Recamier, Bally, in Hôtel-Dieu, Civiale in Hôpital Necker, Rayet and Andral in La Charité, Larrey in the Hôpital des Invalids, Broussais in Vâl de Grâce. A service embraces from forty to one hundred and twenty patients. In each service there is also a younger chef de clinique for the aid of the physician or surgeon en chef. The time of the visits is the morning—sometimes as early as six o'clock. The internes, externes, and other pupils, follow the prescriber from bed to bed. The prescriptions and diet are entered in a book, and this is executed with sufficient rapidity. Then follow in the lecture room eloquent, or at least fluent discourses, and once or twice weekly, operations. After this come also the gratuitous consultations for out patients. In this manner the physician or surgeon is employed from two to three hours each morning. The hospitals, which were not originally designed for their present use, are not handsome buildings, but generally large, and the wings not divided into rooms, but traversed by long halls. The rows of beds against the walls, with their long white curtains, the sœurs hospitalières, in the white or black garb of their religious order, acting as nurses, the images of saints in the corners, the stone floors, the order and the stillness, make a peculiar impression.

The Hôpital de l'Ecole has been built and arranged within a few years. It is opposite the school of medicine, and is especially designed for clinical instruction. It has three wards, one for medical patients under Rostan, one for surgical under J. Cloquet, and one for puerperal cases under Dubois. It is especially remarkable, because the clinics in this hospital resemble the German. There is an examination of the student at the bedside, and the obstetric

department has in part supplied a great previous defect, since exercises in touching and practical illustrations are given, which formerly were entirely wanting, Maternité being accessible only to female pupils.

Among medical societies the first is the Academy of Medicine, which includes in all 170 members, charges itself with the examination of new discoveries and remedies, is consulted by the government, and holds animated discussions in its own body. This society has a public session every fortnight. There are also eight other associations; the Société de Médecine, Athenée de Médecine, Société Médicale d'Emulation, Société Médicale du Temple, Société de Médecine Pratique, Société Medico-Pratique, Société Anatomique, Société Medico-Philanthropique.

Four years' study is requisite to obtain a degree of doctor, and the student must attend the lectures in a prescribed order; this matter not being left, as in Germany, to their own choice. They take sixteen inscriptions, and pay therefor about 1100 francs. They undergo five examinations, all of them public. Three professors, in their robes of office, consisting of a black cloak with red lining, and a cap, address questions to three or four students for about fifteen minutes. Every year about three hundred doctors of medicine and surgery are passed. The students mostly reside in the above named Quartier Latin, having there their resorts for breakfast and dinner, (cafés and restaurants,)—their smoking rooms, (estaminets,) theatres, and reading rooms, (cabinets de lecture,) where the Gazette Médicale and the Lancette Française, the popular medical journals, are always to be found. Whoever would learn farther how the Parisian students live in the fifth story, (au cinquième,) in a chamber of which a skeleton is an essential article of furniture, how they arrange matters with a grisette to attend to their clothing and washing, and how on Sunday they resort to the Grand Chaumière, the favourite dancing house before the Porte St. Martin, may find these particulars at length in the Book of the Hundred and One (*Livre des Cent et Un*). They smoke Flemish pipes, thee and thou each other, call a third person, whose name they do not know, Mr. Chose, and maintain in their own quarter, and in virtue of their numbers, a certain authority.

The concours forms in France the most powerful incentive to exertion among medical men. The operation of this principle commences even with the primary and secondary schools. In the six royal colleges they take place in each class, and there is also a general concours de composition, where, in solemn assembly, in presence of the minister of public instruction, the first prize is adjudged, the victor crowned, declared the first scholar of France, (so little account is made of the departmental schools,) and afterwards presented to the king. A concours is again necessary in order to constitute a candidate externe in a hospital; another makes him an interne; a third determines him an agrégé to the faculty; a fourth a professor. The same sort of trial is sometimes necessary in order to become physician or surgeon en chef to a hospital;

and always in order to be admitted to the academy of sciences or of medicine. The concours consists of an oral trial (*épreuve orale*), of a composition furnished in a given time, and of an investigation of previous titles (*titres antérieurs*). The theses must also be defended against the attacks of the rival candidates. The first trial is particularly for students, the two last are for the professors, and are reckoned the most certain. It is natural to imagine that chance, boldness, and fluency, have their influence, and that favour is not wholly excluded.

The students of all nations can *concour* for an externate in a hospital, provided they are eighteen years old; and after three years, if they have not been internes, can again enter the lists for the extension of their externate to a second triennial term. They bleed, &c., under the responsibility of the internes. The latter reside in the hospitals, receive a small salary, and are bound, at the end of the second year, to *concour* for the hospital prize, if not, they lose their place. An externe or interne has, in fact, opportunities for gaining instruction which exist in a far less degree for the mass of students.

Medical travellers always abound in Paris. The liberality with which the French throw open their institutions to strangers, can hardly be sufficiently extolled. Every day, as you take your walk, so free and unnoticed, among the hospital clinics, lectures, &c., you are again reminded of this; and however pompous it may sound, it is yet perfectly appropriate to feel in this respect a gratitude to the whole French nation. On this account, any marked attention to individual visitors might well be excused. In fact, however, no stranger who has any previous reputation established, fails to receive the *vénération* of the French. In the winter of 1835 several foreign physicians formed themselves into a society. It consisted of Italians, English, Americans, Germans, &c., and Ricord of the Hôpital des Vénériens was president. They met every week in the evening in a lecture room of the Sorbonne. The language was French, but the discussions and other proceedings bore a decided impress of the national peculiarities of the different members; and all was conducted by the president with great address. At the close of the winter the society gradually dissolved.

Among the German medical residents in Paris, who are numerous, there is a reading club which takes most of our journals.

The climate of Paris is not unhealthy; during the first days of his residence, however, a stranger is not unfrequently affected with diarrhœa, caused by the dampness of the streets, the defective mode of warming the apartments, or the water of the Seine. The number of those practising medicine and surgery in Paris, according to the Medical Almanac for 1836, is 1229. Some physicians in France have *Maisons de Santé*, so called, or private institutions for patients, who board in these houses and receive treatment and attendance. In Germany and England there are similar establishments, but only for the insane. Living in Paris is in general cheap; the poorer classes content themselves with bread, chestnuts, and sweet-

ened water; and the cherished wish of the Frenchman, the fowl in the pot on Sunday, seems to be but rarely gratified. The medical traveller in Paris will gain both instruction and amusement—the former in proportion to the pains he takes to acquire it; and it is by no means unlikely that he will feel it an act of self-denial when he takes his departure.

LONDON.

London is not the whole of England, as Paris is of France, but it offers in many respects an epitome of all countries. One finds in London such an abundance of scientific materials, that they at least deserve to be united into one whole, and to assume the form and name of a university. Such a metropolitan university is now expected, and it will be able to surpass those of Edinburgh, Dublin, Glasgow, Aberdeen, and St. Andrews, and to take a distinct character from those noble institutions at Oxford and Cambridge. The Thames flows through the town in a curve from west to east—passes under six large bridges and over the famous tunnel—and presents a sort of mixed character of sea and river, having brackish water and a tide. The principal part of the town lies north of the river. In the middle is the city; the west and east ends on the sides, Southwark on the south, and the boroughs form the environs. The shipping on the river and in the docks reaches from the sea to the first bridge. The bustle of the city is gradually extending itself towards the west end, to the squares and parks, where the more quiet people reside, and toward Westminster, where stands the parliament house and the abbey.

There are nine hospitals with schools attached, and a large number of infirmaries, dispensaries, work-houses, &c. The hospitals, which include instruction on the theory and practice of medicine, and on surgery, are, counting from east to west, the following:—

1. London Hospital, school and practice, 485 beds. *Physicians*: Frampton, Billing, Gordon. *Surgeons*: Andrews, L. Scott, Luke.

2. St. Thomas's Hospital, school and practice, 400 beds. *Physicians*: Williams, Roots, Burton, Lister. *Surgeons*: Travers, Green, Tyrrell, South.

3. Guy's Hospital, &c., 400 beds. *Physicians*: Cholmeley, Bright, Back. *Surgeons*: Key, Morgan, Bransby Cooper. *Consulting surgeon*: Sir Astley Cooper.

4. St. Bartholomew's Hospital, &c., 400 beds. *Physicians*: Hue, Latham, Roupell. *Surgeons*: Laurence, Vincent, Earle.

5. University of London Hospital, &c., 100 beds. *Physicians*: Elliotson, Thompson, Carswell. *Surgeons*: Sam. Cooper, Liston, R. Quain.

6. Middlesex Hospital, &c. *Physicians*: Hawkins, Watson, Wilson. *Surgeons*: Sir Charles Bell, H. Mayo, Arnott.

7. St. George's Hospital, &c., 330 beds. *Physicians*: Chambers, Seymour, Wilson, McLeod—*Assistant*: Hope. *Surgeons*: R. Keate, Sir Benjamin Brodie, Hawkins, Babington—*Assistants*: Walker, Cutler.

8. Charing Cross Hospital, &c., 100 beds. *Physicians*: Shearman, Golding, Sigmond, Chowne. *Surgeons*: Pettigrew, Howship.

9. Westminster Hospital, &c., 250 beds. *Physicians*: Bright, Roe, Sir George Tuthill. *Surgeons*: Sir A. Carlisle, White, Guthrie, W. Linn.

There are also three hospitals for syphilitic patients, termed Lock Hospitals; Lying-in do.; several insane do., especially New Bethlehem and St. Luke's; a London fever hospital, three for diseases of the eye, &c. There are five infirmaries and eleven dispensaries. To find a description of these, the traveller will do well to consult the British Medical Almanac, or the last September number of the *Lancet*, or the London Medical and Surgical Journal, or the Medical Gazette.

The above hospitals are not, as in France, the common property of the nation, but are, with the exception of the three largest, St. Bartholomew's, Guy's, and St. Thomas's, which, together, have a fixed income of £140,000, maintained by the contributions of companies. Whoever, in fact, contributes one or two pounds yearly, or a certain sum at once, acquires the right of sending patients to the hospital, of speaking at meetings, of voting in the choice of officers, of participating in the management of affairs, in short, becomes a governor. Besides the proper physicians and surgeons, there are others whose business it is to deliver lectures on those subjects which are necessary to surgeon apothecaries, or what are termed general practitioners, in their examination at the College of Surgeons, and by the apothecaries' company. These schools at the hospitals have rather a surgical and anatomical than a medical character, and more of a practical than theoretic tendency. As an examples of their organisation, we give here the list of one of the most extensive schools, that of Guy's Hospital.

Lectures.	Lecturers.	Days and Hours.	Fees.	
			£. s.	£. s.
Medicine, {	Drs. Bright and Addison,	Monday, Wednesday, and Friday, at 3½ o'clock,	{ 4 4 and 8 8	
Mat. medica, {	Addison,	Tuesday, Thursday, and Saturday, at 3½ o'clock,	{ 3 3 " 4 4	
Obstetrics,	Ashwell,	Daily, at 8½ o'clock,	3 3 " 10 10	
Chemistry,	Aikin and Taylor,	Monday and Friday, at 9¾ o'clock,	{ 4 4 " 8 8	
Anatomy, {	B. Cooper, Cock, and Hilton,	Daily, at 9¾ and 2 o'clock,	8 8 " 21	
Legal med., {	Taylor,	Monday and Friday, at 9¾ o'clock,	{ 3 3 " 4 4	
Surgery,	Key and Morgan,	Tuesday, Thursday, and Friday, at 8 o'clock,	{ 3 3 " 5 5	
Botany,	C. Johnson,	Monday, Tuesday, Thursday, and Friday, at 6½ o'clock,	{ 2 2 " 3 3	
Pathological Anatomy, {	Hodgkin,	Tuesday, Thursday, and Friday, at 6½ o'clock,	{ 2 2	
Comparative Anatomy, {	T. Bell,	Monday and Wednesday, at 6¾ o'clock,	{ 2 2	

N. B. The first named sums are for a single course, the second for unlimited attendance.

The mere visiting of the hospitals and the medical patients, for eighteen months, costs £15 15s.; of the surgical wards, £26 6s. yearly, and £20 half yearly; rendering manual aid as surgeon's dresser, £51 2s. yearly.

There are also special schools with special teachers. The first was founded by William Hunter, in the Hunterian School of Anatomy, Great Windmill street; there are also Blenheim street school, Webb street school, Aldersgate street school, Kinnerton street school, recently founded by Sir Benj. Brodie, Free hospital school, school of anatomy and medicine adjoining St. George's Hospital. In most of these, only single courses are given, but all have attached to them at least a museum and an anatomical theatre. On the whole, there are twenty schools in London. Among the lecturers are, to mention the larger part, in medicine, Davies, Williams, Bright, Whiting, Marshall Hall, Elliotson, Copeland, F. Hawkins, Burne, Stevens, Wilson, M'Leod, Seymour. In midwifery—Hugh Ley, Rob. Lee, Davies, Ramsbotham, Rigby, Ferguson, Ryan. In surgery—Lawrence, S. Cooper, Arnott, J. H. Green, Guthrie, Liston, Babington, Hawkins, Pettigrew, Travers, Key. In botany—Lindley, Edwards, Dickson, Hayes, Pereira. In chemistry—Turner, Brande, Faraday, Epps. In pathological anatomy—Hodgkin, Howship, Carswell, Barker.

There are also hospitals and schools, some of which are recognised by the College of Surgeons in London, in the provincial towns of England, especially Leeds, Liverpool, Manchester, Bristol, Bath.

The object of dispensaries is to furnish medicines to the poor, and to attend them in their own houses and among their families. The free hospital receives patients without the recommendation of a governor; which in the others is required, except in case of recent accidents. A self-supporting dispensary is formed by the contributions of the poor themselves, at the rate of a penny a week, and five half-pence for families, in consideration of which they are attended in sickness. Such an one has lately been established, and forms a kind of saving fund.

The English hospitals are mostly large and handsome edifices. The largest are Guy's, St. Bartholomew's, and St. Thomas's; the handsomest, St. George's, Guy's, and the London and Westminster Hospital lately built in Gothic style. The Greenwich, Chelsea, and New Bethlehem, which are rather asylums for maintenance, excel both in size and beauty. As the palace of St. James is by no means splendid externally, it has been said, with some exaggeration, that the sick in London dwell in palaces, and kings in cottages. The hospitals are well provided for, owing in part to the liberality of the English, in part to the general rivalry for a leading share in their internal management. The subscribers, to whom the hospital belongs, hold weekly or monthly meetings for business, and a yearly dinner, at which they converse and make up a collection. Sometimes violent dissensions occur among them. It belongs to

the same body to elect the physicians and surgeons. For the most part, those are chosen who are thought likely to maintain and increase the notoriety of the institution. They receive no other recompense than the fees already mentioned as paid by the pupils, and the advantage they find in becoming known, by their conspicuous position. Although fame and practice may be obtained by means independent of these appointments, yet these are regarded as the surest passport to both. A visit is made daily by one physician and one surgeon, so that each of the attending practitioners comes twice a week. One day in the week is devoted to receiving new patients, always excepting those meeting with accidents, to whom a separate ward is allotted, and who require no recommendation; and one day to operations, generally at one o'clock. This day is in the different hospitals as follows:—

Tuesday, at Guy's.

Wednesday, at the London.

Thursday, at St. George's, and the Infirmary for Diseases of the Eye, in Moorfield.

Friday, at St. Thomas's.

Saturday, at St. Bartholomew's and the Westminster.

The examinations of patients are brief, and afford little instruction to the pupil, because little regard is had to him; at least not so much as in the explanations and questions which occur at the bedside in German practice. Regular clinics have only recently come into general use. If I mistake not, Brodie was one of the first who delivered clinical lectures in cases of disease. They are now common to most of the hospitals, but it is rather in the French manner of general remarks, than by making the student prescribe, and overlooking his treatment, according to the German method. On the other hand, questions are often addressed by the students to the professors, expressed with great freedom, and answered in the same style.

The internal arrangement of the hospitals is not so uniform as under the administration générale at Paris. Baths are not of so frequent application. Cleanliness and order are perfect. The wards are not so large as in Paris, have wooden floors and a chimney, are frequently washed, whitened, and painted, and as free air is deemed of great moment, the windows are often open. The bedsteads are of iron, without curtains, or having these to reach from the head to the middle of the bed. The sick are not in all instances separated according to their respective ailments; surgical and medical patients are side by side. Above the head hangs a ticket, with the name and the directions, the prescribed diet for instance, as broth diet, fever diet, ordinary diet, &c.; the ticket also contains the name of the attending physician or surgeon, or both, when both have charge of the case. In St. George's, the first story contains the medical patients, the second the surgical; the females are in the left wing, the males in the right. There are

nurses appropriated to each ward; the hour of dining is from twelve to one o'clock, and therefore coincides with that of the visit. The sick wear a peculiar hospital dress, by which the convalescents are distinguished from the servants, attendants, &c. A large assembly room, a library, and museum, are seldom wanting; and a botanic garden is an occasional addition.

The pupils are of three classes:—First, those who are enabled by their means and position to take degrees of medicine at Oxford, Cambridge, Edinburgh, or Dublin; these are the fewest in number. Second, those who intend to practice surgery merely, and after examination become members of the College of Surgeons. And third, those who are also apothecaries and general practitioners, and who are examined by the apothecaries' society. The character of these medico-chirurgical hospital schools is therefore not as high as that of the universities. Much might be added to the present objects of instruction. The students make the visits with the physician, and refer carefully to the case-book which each carries with him, and which contains the journals of the cases. They take more part in the treatment, when they are surgeon's dressers, or house surgeons, which situations are expensive. The first, for instance, pay £51 2s. per annum, and £32 12s. for half a year. It must be conceded, that their external appearance, and general manner, make a much more favourable impression than those of the Parisian students. The whole business of medical instruction in the London hospitals and schools, is despatched in seven months, from the first of October to the end of April. During this period only are lectures delivered, which are distributed into two sessions, the second of which commences the middle of January. During the other five months, the hospitals can be visited, and single courses of lectures are delivered; but it necessarily happens that the great proportion of students are absent from London until the session recommences.

Medical learned societies are numerous in London. The Royal Medical and Chirurgical Society publishes the famous transactions. There are also the London Medical Society, the Westminster Medical Society, the Hunterian Society, the Medico-Botanical Society, and other not exclusively medical associations. Among these, the well known British Association is of recent formation; of similar character is the Provincial Medical Association, which holds annual meetings in some of the smaller cities, and likewise publishes transactions.

The climate of England is well known. The earth is fair, the sky is less so. England is damp and foggy, full of sea-coal smoke and soot, but very favourable to the growth of vegetables, cattle, and men. The race of the latter is stronger and handsomer than in France; the skeleton is often nobly formed; a well-shaped head is fitted on a slender neck and narrow pelvis, and the extremities are seldom too long. The skin and teeth are especially free from colouring matter, which seems to be all transferred to the eyes and hair. The mortality in London is not greater than in the country,

and there are many instances of longevity, which would be more numerous, but for residences in hot climates, and the dangers of the sea. The English cuisine does not develope the highest skill in the art; they serve up vegetables in small amount and merely boiled, without any farther preparation; meat in abundance, and wholesome; their breweries afford a strong and nutritious product, and the wines of the south of Europe are generally drank. The good living and the climate have an especial effect on a foreigner. The digestive apparatus accustoms itself to a less amount of more concentrated solid aliment, and to beverage, partly nutritious also, and partly well charged with alcohol, which in this country can be taken and well borne in large quantities. This gross food, with the dull climate, gradually extends its influence from the abdomen to the nervous system. The German begins to feel the English spleen, not, indeed, in the first week, but after some months, and a greater or less propensity to self-murder begins to develope itself. This disposition of mind and body is, however, soon overcome, and the "*mens sana in corpore sano*" is, after all allowance for national weakness, the proper attribute of the Englishman.

A stranger in England finds some difficulty in comprehending medicine and surgery in their various relations, because the hospitals are less accessible and their inmates less talkative than in Paris. In England, you owe your admission into the public institutions to individuals, in France to the nation, and the sense of obligation is much more concentrated in the former case than in the latter. Every time you enter a hospital here you are received with English hospitality; and in his manner to one whom he knows, in the direct frank kindness with which he aids you and procures you the aid of others, the Englishman is a pattern. The various objects of interest are often so remote that one is compelled to exert a constant activity to visit them. Beside the hospitals, one must at least find time to visit the Docks, the Tunnel, the Tower, St. Paul's, Apothecaries' Hall, the Adelaide Gallery, where are to be found models of the latest discoveries in an exhibition got up by a society for "the illustration and encouragement of practical science," both the Geological Gardens, the British Museum, National Gallery, College of Surgeons, which at this moment cannot be seen on account of repairs, the College of Physicians, Westminster Abbey, Parliament House, Vauxhall Gardens, the theatres, &c. But the stranger will meet with abundant objects of curiosity, even in the streets and highways, more or less suited to his taste. On the whole it is advisable not to adopt the *nil admirari* principle, not only because it is a cold pleasure-destroying maxim in itself, and here particularly misplaced, but because the English expect that a stranger should both see the lions and express a due degree of wonder.

For the further illustration of the state of science in England, and that the reader may gather a general impression of the knowledge possessed by the surgeons, general practitioners, and doctors of medicine, I subjoin the regulations adopted respectively by the

College of Surgeons, the Apothecaries' Company, and the University of Edinburgh, for the conduct of their examinations.

The council of the College of Surgeons, consisting of twenty-one examiners, require of the candidates,—

1. To be twenty-two years old.
2. To have devoted five years to acquiring a knowledge of the science.
3. To have studied anatomy and physiology by attendance on lectures and demonstrations, and by personal dissection during two seasons of at least seven months.
4. To have attended two courses of lectures on surgery.
5. To have attended lectures on physics, chemistry, and midwifery, for six months, and on materia medica for three months.
6. To have attended surgical practice for twelve months in a recognised hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or twelve months in a hospital elsewhere and six in one of the above.

The board of examiners of Apothecaries' Hall require,—

That the candidates shall have attended lectures during three winter sessions (from October 1 to April 15), and two summer sessions (from May 1 to July 31).

First Winter Session.—Chemistry, anatomy, physiology, anatomical demonstrations, dissections, materia medica.

Second Winter Session.—Anatomy and physiology, anatomical demonstrations, dissections, theoretical and practical medicine, medical practice in a hospital.

First Summer Session.—Botany, and other similar subjects, subservient to general education.

Second Summer Session.—Botany, if not attended the preceding season, midwifery, diseases of women and children, legal medicine, medical practice in a hospital.

Third Winter Session.—Dissections, theoretical and practical medicine, midwifery, medical practice in a hospital or dispensary.

They must likewise have served five years' apprenticeship to an apothecary, and be twenty-one years of age.

The examination consists in translating out of Celsus and Gregory's *Conspectus*; in medical prescriptions and questions from the *Pharm. Londin.*; in chemistry, materia medica, botany, anatomy, and physiology; in theoretical and practical medicine. Besides the general means of gaining the necessary knowledge to withstand these examinations, there are special teachers who prepare candidates at short notice, and are called "grinders." Both classes, as well surgeons (always distinct from the pure surgeons) as apothecaries, in general commence their career by being apprentices to an older practitioner.

The University of Edinburgh, according to the latest statutes for 1833, makes the following requisitions:—

1. No one can obtain the degree of doctor of medicine who has not devoted four years to medical studies, at least six months in each year, either in Edinburgh, or at some other university, where degrees of M. D. are conferred.

2. He must give evidence of having studied the following branches under a professor at a university:—

Anatomy ; chemistry ; materia medica and pharmacy ; institutes of medicine ; practical medicine ; surgery ; midwifery and diseases of women and children ; general pathology ; practical anatomy ;—in six months' courses.

Medical clinics, or the management of patients under a professor who lectures on the cases, in courses of six or three months.

Surgical clinics ; legal medicine ; botany ; natural history, including zoology ;—in courses of three months.

The candidate must also have dispensed, prescribed, and practised, for six months, with a recognised apothecary or surgeon, or in a hospital.

3. He must be twenty-one years old ; be versed in the Latin language ; in literature and philosophy ; and must himself have written a dissertation in Latin or English.

4. He must be examined orally, or by writing, by the faculty,—*First*.—In anatomy, chemistry, botany, theoretical medicine, and natural history. *Secondly*.—In materia medica, pathology, practical medicine, surgery, midwifery, and legal medicine.

5. If rejected on examination, he must study a year longer before a second trial.

6. If passed, he is expected, though not compelled, to print his thesis, and then forty copies must be given to the dean.

The degree is conferred in August ; some days previous he is called on by the senatus academicus to defend his thesis publicly.

These regulations are obviously similar to those of the German universities. The University of Edinburgh, which for some time had been losing its ancient renown, made a great effort to regain its position. Hence the adoption of these rigid conditions ; a measure which Sir Charles Bell, who goes thither as Professor of Surgery, has been earnest in forwarding.

CHAPTER II.

DOCTRINE OF INFLAMMATION IN FRANCE AND ENGLAND.

Surgical and medical doctrine of inflammation—Origin of both—Distinction between them—General character of medicine in France and England—Overweening regard to the blood—Reaction—Sir C. Bell's nervous theory.

The importance which has ever been attached to the theory of inflammation is well known, and it will not be disputed that this subject holds even a higher place in science at the present day than at any former period. If we take this then as our guide in judging of the condition of medicine and surgery in the two nations, we shall find this main distinction in the manner in which this subject is regarded in France and in England. In the latter country the theory of inflammation is more nearly allied to surgery, in the former to medicine. This distinction, which cannot easily be misunderstood, has no reference to the view taken of the nature of inflammation, but solely to its connection with one or the other of these departments of science.

The improvement of the doctrine of inflammation in England was effected in surgery by John Hunter; in France, in medicine, by Broussais. It will be proper to allude to some circumstances attending this accidental diversity, then to adduce some proofs of the existence of the distinction already stated, and lastly to apply this as the basis of a parallel between the state of medicine in the two nations.

It is almost impossible to estimate too highly the wonderful labours of John Hunter. Besides improving both branches of natural history, zoology, and botany, both in extent and accuracy, he took at once possession of the whole subject of medicine. While investigating, however, with so much success, human, comparative, and pathological anatomy, and particularly the process of inflammation, he took rather the surgical than the medical view of these subjects. He not only came forward first, and proved by his own investigations, when the question arose in regard to the formation of pus, that no pus is formed without preceding inflammation; he not only pointed out, in analysing the process of healing, its analogy to secretion; not only described granulation, adhesion, respiration, descriptions of which surgery has most advantageously availed itself; but likewise, and this fact should be made especially prominent, he made the subject of inflammation the central point of his pathological researches, and proposed it to succeeding enquirers as of primary importance and moment. As he considered inflammation, at least after injuries, to depend on the state of the blood and vessels, and its various modifications to be determined by the nature of the tissue, especially in syphilis, he impressed these principles so strongly on his countrymen, that their surgery still retains the same leading character. He died in 1793. His surgical disciples followed in the track thus pointed out. They made the anatomy of

regions their groundwork, regarded inflammation as he had taught them, only superadding Astley Cooper's doctrine of irritation, and thus carried surgical treatment to a degree of simplicity and clearness, which aroused the wonder and excited the imitation of other nations. Their untiring zeal likewise produced museums filled with anatomical and pathological preparations. But, as already remarked, medicine has gained much less advantage from Hunter's influence. When the British parliament purchased Hunter's collection and offered it to the College of Physicians, the latter declined receiving the gift, on account of the expense of preserving the specimens; the College of Surgeons, as well became them, accepted it with great joy, and still regard it as the greatest treasure.

While in this manner the theory of inflammation obtained an important place in English science, it had in France a different destiny, and became a part of medicine. At that time (1800) Pinel's nosography was the whole of French medical science. But a great revolution was soon effected by the genius of Bichat, to whom Pinel himself was not a little indebted. Xavier Bichat overturned the simple general system of anatomy, pointed out the variety of the structure and of the physiological life of the membranes, brought prominently into view pathological anatomy and the local character of disease, but died before the application of his discoveries could be made to medical science. On this Broussais came to the rescue, seized with the whole force of his mind the doctrine of inflammation, and raised it high above all others. He did not investigate its progress, nor illustrate it, like Hunter, by direct observation, which indeed was difficult when it occurred in internal parts, but he proved that it was or had been present. He acknowledged no difference in its essential character, but only a variation in degree. He carried it so far as to found upon it a complete system of medicine, and he has carried the assumption and treatment of inflammatory conditions to an extent and perfection, which, notwithstanding all opposition, has gained him numerous adherents, and caused the idea of inflammation even now to predominate in medicine.

The following may be recognised as the distinguishing features of the medical and surgical doctrines of inflammation:—

The first concerns their anatomical relations. The surgical doctrine has descriptive anatomy, or that of regions, for its basis; the medical rather general, or, in the sense of Bichat, physiological anatomy. The former contemplates inflammation in the external integument, the cellular tissue, the bones, the synovial membranes, the muscles and tendons, the fascial arteries, veins and nerves, or, by regions, in several of these together; the latter rather considers it in the organs of the three great cavities, in their various composition and structure, in the parenchyma, in the glands, and among the simple systems, especially in the mucous and serous membranes.

Another great distinction lies in the far larger number of results which the medical school admits; results at least in this sense, that organic changes are supposed to be necessarily preceded by inflam-

mation or stimulus. The doctrine of Hunter acknowledges no other results than discussion, hardening, adhesion, suppuration, ulceration, and mortification, while the other has, besides these, hypertrophy, the whole series of accidental formations, tubercles, softening of and exudation from the serous membranes. This is in fact a very important point, one which connects itself especially with the Broussaian doctrine. Hence the importance of the contest which Broussais had with Laennec respecting the origin of tubercles, whether here any sub-inflammation or excitation precedes; in other words, whether tubercles are enlarged lymphatic glands as Broussais maintained, or of the nature of deposit, as Laennec thought. Laennec died, and his rival remained for the most part victorious, by the general admission of a preceding stimulus.

A third distinction is more important, as respects the treatment, than the second. The surgical view divides inflammation into healthy and unhealthy; the medical regards it as simply unhealthy. What in one view is welcomed, cherished, or at most moderated only, is, in the other, opposed by the most powerful measures. The latter sees in inflammation, excepting only the so called critical abscesses, only a disease, never a wholesome effort of nature.

Applying this scale to the comparative condition of medicine and surgery in the two countries, we find that in England surgery is constituted and acts in perfect harmony with the simple and sure knowledge of surgical inflammation; but that medicine is less conscious of any doctrine of inflammation, and makes less, whether too little is hard to say, account and application of it; that in France, on the contrary, inflammation predominates (whether or not too much is easier to determine) as an almost constant local affection, while in surgery it is much less, in fact, very little, estimated and regarded. English medicine is therefore free from the uncertain medical inflammatory states which characterise the French, and French surgery is too little acquainted with the, so considered, surgical inflammation of England. Other circumstances of difference are found in the literature and the practice of the two countries.

The distinguished writers on inflammation in English literature, as Hunter, Duncan, Thompson, Astley Cooper, Travers, James, Wilson, Lucas, Jones, Earle, not to mention others, are numerous. In France there is hardly a monograph to be mentioned on the subject of inflammation, except that of Gendrin (in 1826), who thereby gained a prize, and who keeps especially in view the general tissues of Bichat.

In practice, the French surgeons still retain their preference for healing by the second intention; a preference which, unless founded in endemic constitution, in peculiar aptitude to erysipelatous inflammation, or in the want of plasticity in French blood, is certainly to be regarded as a great mistake. Roux was surprised during his visit to England, in 1816, when he saw the treatment of wounds by adhesive methods. He tried the experiment in his own hospital, but has for the most part gone back since to his

former system. On this subject there has been a strong conflict of opinion in France. Dupuytren did not wholly reject this method, and so far Dubois, Richeraud, and Maunoir agreed with him. But Pelletau, Boyer, and Larrey, maintained their opposition. Larrey says on this subject in his *Clinique Chirurgicale*, for 1830:—"Union by the first intention is not always desirable, especially not in general or chronic disease; and for the rest there is never much to be gained by it." Serre, of Montpellier, has lately written on this subject a "*Traité de la Reunion Immédiate*." The latest essay is by J. Sanson, "*De la Reunion Immédiate des Plaies*, 1834," in which he endeavours to estimate the advantages and evils of the practice. This matter, therefore, which is considered as settled in England, is still a subject of controversy in France. The English always attempt primary union in the first instance, and if this fails, content themselves with the secondary. The French know as little in regard to the beneficial operation of cold water. They still use more lint and more cerate than any other surgeons.

In Germany, where all foreign improvements are well known, and where, perhaps, on deliberate comparison, the two forms of inflammation are viewed in their correct relation to each other, much attention is paid to what is termed the specific character of inflammation, a subject on which I shall not attempt to enlarge in this connection (see fifth chapter on Ophthalmology). The whole subject of inflammation, however, the nature of which, and the extent of the application of the term, are both subjects of dispute, has always one circumstance attending it, the condition of the blood and blood-vessels, which especially attracts attention. Since Harvey's discovery of the circulation, the blood and its vessels have been kept constantly in view. These formed the leading objects with Boerhaave, in his theory of the thickening of the blood and the pressure of the globules into the capillary vessels; of Cullen, in his doctrine of spasm in the small vessels, and of Hunter, in his assumption of the vitality of the blood. The effect of this was evident in the treatment. Attention was directed to antiphlogistic means, and to withdrawing that which was regarded as the cause of the morbid process. The greater the importance attached to the local inflammation, and the less the phlegmon was regarded as a general disease, the more thorough was the antiphlogistic practice and the abstraction of blood. It was also a circumstance calculated to bring medicine nearer to surgery, and thus to simplify practice, that the surgeon easily held himself qualified to practice on medical diseases with the means peculiar to his own art, provided the case, complicated or difficult as it might be, had this process as its leading cause. It necessarily happened, however, that opposition arose to this frequent blood-letting, and consequently to the so general admission of an inflammatory condition, with which view this mode of depletion came to be almost inseparably connected. In this way, therefore, on the ground of treatment, of practice, arose the first reaction against the doctrine of inflammation. This may be seen plainly enough both in France and England. In France

Louis announced, as early as 1828, and afterwards in 1835, after new investigations, his "Researches on the Effects of Blood-letting in certain Inflammatory Diseases." In this work he condemned the excessive confidence which had been reposed in bleeding in pneumonia, and from his observations, made according to the numerical method, he draws the conclusion that venesection may exert a favourable influence on pneumonia and abridge its course, but only when employed in the first two days or towards the close; and that this influence is much less than had been generally imagined. This work is dedicated to an Englishman, Marshall Hall, who himself published in 1832, in the seventeenth volume of the Medico-Chirurgical Transactions, some experiments on the effects of loss of blood, made on dogs, to determine how this depletion acts where there is no morbid state, what difference is made by age, what organic changes ensue upon the operation, what rules and bounds can be prescribed to the employment of the remedy, and what is the most effectual mode of restoration after hemorrhage. In 1835, J. Wardrop published researches on blood-letting. These are at least evidences of a tendency to, and readiness for, a second and more decided reaction against the antiphlogistic course hitherto pursued. A circumstance favourable to this tendency may be found in the prevalence of that genius epidemicus, which causes typhus to abound. Such an explanation, however, of the change of theory and of practice in medicine is entirely too German and too ingenious for a Frenchman to understand.

The other change in the theory of inflammation seems destined to be effected by physiology. As the doctrine of Hunter was preceded by the discovery of Harvey, as this was the true fountain from which flowed that current of reasoning by which the supremacy of the blood was established, so in our days all are ready to attribute an augmented degree of importance to the nerves, the natural rival of the circulating system. The discovery of Bell has been justly placed in comparison with the discoveries of Harvey. The truth of his doctrine of the nerves, and, to use the expression, of the nervous circulation, the distinction of the motive, sensible, respiratory and organic power has, with greater good fortune, met with notoriety, belief, confirmation, respect. This happened as well in England as in France and Germany, through such men as Marshall Hall, Wilson Philip, Magendie, Flourens, Panizza, Bellingeri, John Müller. Nowhere, perhaps, out of England, have these new views met a more cordial reception, or been applied more extensively to pathology and therapeutics than in Germany. Thus far, indeed, it cannot be pretended that these views of the physiology of the nerves have been applied to explain, or have had any direct influence on, the doctrine of inflammation. But perhaps it is not unreasonable to hope, that the light which has been hereby thrown on the subject of local pain and palsy, may yet be extended to this.

CHAPTER III.

FRENCH MEDICINE.

Broussais's doctrine ; extent of its influence—French medicine independently of Broussais—Auscultation and percussion—Louis and the numerical method—Fièvre typhoïde—Reflections on French therapeutics—Ricord's observations and practice in the Hôpital des Vénériens—Phrenology and Orthophrenia.

We must now allude again to Broussais and his doctrines, without which, any account of French medicine must necessarily be imperfect. This brief review will probably make it evident to many that much of his doctrine has been adopted into the science, and has tended to form the peculiar national views on the subject. We shall speak first of Broussais's views on inflammation—then upon sympathy and revulsion—lastly, on the relative importance of the mucous membrane.

Broussais does not pretend, in his pathology of inflammation, to explain its nature, but only to prove its extensive existence, and to demonstrate that the inflammatory condition of an organ is only an increase of its vitality ; he dwells especially on the mere distinction of degree, but rejects the various forms of the disease. Hence he called his doctrine the physiological, because inflammation is not a new condition in the economy, but an exertion of the usual organic vitality. Thus the vascularity of the stomach during digestion is physiologically in its normal state, but pathologically somewhat increased. He rejects, therefore, what he terms *entities*, by which are meant separate and dissimilar conditions of the economy, and equally rejects all specific treatment. He denies scrofula and syphilis to be distinct entities, and seeks to explain the medicinal virtue of cinchona and of mercury, by the transfer of local irritation to internal mucous membranes. He proposes three degrees of phlegmasia ; beside inflammation there is sub-inflammation, in which there is no redness, because the red particles do not force their way into the serous vessels ; and likewise mere excitement or irritation.

Broussais has pointed out the facts, that we may have an intense local inflammation in a weakened constitution ; that the greater part of diseases have an actual local cause, and that this is of an inflammatory or irritative nature—in fact, of a nature to be benefited by counter-irritation. Thus far he deserves credit for the pathology of pneumonia, bronchitis, pleurisy, and for the explanation of phthisis, asthma, whooping cough, hydrocephalus. He pointed out that inflammatory stimulus gives occasion to delirium, mania, epilepsy, apoplexy ; farther to stricture, blennorrhœa, adhesion. He thus supplied a cause for all the organic alterations which pathological anatomy found in such abundance, especially in regard to the alimentary canal ; he maintained that pain was not always a companion of inflammation, that the mucous membrane might be inflamed alone and without involving the peritoneum, that dyspepsia,

jaundice, (duodenitis,) tabes mesenterica, (swelling of the mesenteric glands, as a sequel of gastro-enteritis, analogous to swelling of the inguinal glands in inflammation of the urethra,) diarrhœa, dysentery, melæna, ascites, and diseases of the kidney, depend on inflammatory states.

He farther considered the pathology of fever. He taught that fever may arise from inflammation of a part, when sufficiently active to be transferred to the heart. "In this case the contractions of the latter are more rapid, the circulation is accelerated, and the increased heat of the skin is found painful; symptoms which we name fever. Nay, wherever there is fever, if a local affection is the maintaining cause, it is not an essential fever." He does not say, indeed, as should here be remarked, that all fevers proceed from gastro-enteritis, but he says that disease, that is, irritation, of an important organ may cause disease in another organ through sympathetic irritation.

The doctrine of sympathy and revulsion was especially rendered prominent and clear by him. Sympathy is the physiological relation in which organs stand to one another; revulsion appears in pathological conditions. Sympathy rests upon two laws, which constitute sympathy of relation, or that of animal life and organic sympathy. Examples of the first are found in inflammation of the mucous membrane, of the alimentary canal, headache, convulsions, delirium; organic sympathy, on the contrary, shows itself in excitement of the circulation, heat of skin, jaundice, or in the respiratory organs in cough and oppression. If the animal sympathy is excessively excited, the patient may die in consequence of a reaction upon the nervous system of animal life, and if the sympathy of organic life is unduly roused, he may fall a victim to disease of the lungs, liver, &c. Hence it especially results, that sympathetic excitements of the functions, when great and long continued, may from functional be converted to actually organic diseases. Thus headache in enteritis may proceed to actual inflammation of the brain, or through intense and continued sympathetic affection of the heart, disease of this organ may be developed; pneumonia may arise from cough and stricture; or, in inflammation of the brain, a gastritis be brought on by the vomiting. Hence it is unscientific to direct the treatment to the functional disease alone, and much safer to consider the organ itself as affected.

Revulsion is a change of the seat of disease dependent on sympathy. It may be effected by art, and employed as a therapeutic agent, or occur independently of interference from treatment. An example of the former is afforded by blistering in pleurisy, of the latter by metastasis to the mucous membrane of the intestine in pleurisy. Revulsion is threefold. It may take place from one internal part to another, which is internal, from an external to an internal, which is central, from an internal to an external, which is peripheric revulsion. The advantage or danger of revulsion has been always considered as depending on the comparative importance of the parts between which the exchange is effected, and like-

wise on their respective ability to relieve themselves by secretion. This, for example, cannot occur in the brain, and hence it is especially desirable to effect revulsion from this organ.

Artificial revulsion is now always readily employed in treatment, though nature cannot always be successfully imitated in this matter; and it might well be supposed that Broussais, who has so ably described its influence, would especially recommend its application. He reminds us, however, that revulsive measures are in their nature stimulant, and though for the most part local in their action, may become the source of actual inflammation, and thus another organ be rendered the seat of disease, unless increased secretion supervene, which is not always the case. Thus drastic cathartics, diuretics, and hepatic stimulants may prove irritant to the kidneys, intestines, and liver, unless the respective secretions ensue. Broussais therefore rather opposes than favours active revulsion, though he allows that crises are retarded by acute local inflammation; when this is relieved, the crisis supervenes, and this offers the best means of bringing about such a result.

Gastro-enteritis, in its relation to the doctrine of Broussais, demands especial notice. Broussais, who maintains that the whole system can never suffer simultaneously—be universally aroused or depressed—but that local excitement in one part must be accompanied with local debility in another, also thinks, and thus far with Brown, that local stimuli determine this. When by their means excessive excitement occurs in one part, this happens first to those organs which are most abundantly supplied with nerves. This applies especially to the brain, which, however, resists inflammation much more than others, while no part is more susceptible than the digestive apparatus. The lungs are less so, because although well supplied with blood they are less rich in nerves, “not so thickly strown with these irritable nervous papillæ” which, furnished by the ganglionic system, and by the numerous ramifications of the cerebral nerves, give to the stomach that extreme sensibility which so well fits it for its peculiar functions. It is because the organic sympathy, and that of relation, are so closely united in the alimentary canal, that irritation there is so easily produced, sometimes primarily, and sometimes, if considerable inflammation is developed in another part, the alimentary canal is destined to suffer secondarily. He adduces, as an example, the case where, after lithotomy—and he might have added, after injury of the head and brain, in an individual of good constitution—fever and inflammation follow, and while the irritation extends, congestion takes place in various organs, in none more frequently than that of digestion; and if circumstances, predisposition, and treatment favour such a result, gastritis or peritonitis is developed. Few fever patients will be found in whom pressure on the stomach is not painful. How little encouragement Broussais requires, in order to decide on the presence of inflammation, is hinted above; and according to him, inflammation of the gastric mucous membrane is very apt to extend downward, and thus a gastro-enteritis to be developed. With him

dyspepsia is gastritis, vomiting happens from inflammatory swelling and contraction of the pyloric orifice, diarrhœa because the inflammation extends to the ileo-cœcal valve; dysentery is colitis, dysuria, cystitis, and red tongue and throat indicate the internal fire which blazes up as through the crater of a volcano. Acute cutaneous diseases show themselves in a kind of erythema, and if a certain constitution of the season is present, the character of the disease is still more marked. The victim of measles or scarlatina dies, not of the affection of the skin, but of the accompanying gastritis. Though Broussais was not the first to notice, he has directed attention to the fact, that the fatal or favourable termination, the more or less rapid return of strength in these diseases depends, not on the eruption, but on the condition of internal organs. Assuming the fact that enteritis is usually present in fever, (for the charge that he makes it essential to the latter is unjust,) he never applies internal means, which might produce local irritation, but demulcents, oils, gum-water; while cathartic medicines are replaced by mild clemas, and leeches and cupping form the most active remedies.

How far do dissections maintain these doctrines? Dissections have proved much. Few bodies are opened without finding evidence of visceral affection, sufficient at least to have maintained the fever which proved fatal. Andral, an opponent of Broussais, as we shall see below, has given an account of fifty examinations of persons who died of fever. He found, in three fifths, sufficient disease in the intestines to account for death. Of the remaining two fifths, three were cases of erysipelas of the lower extremities; two, arachnitis; two, croup; one, hepatisation of the lungs; four, diseases of the stomach; and in four the lungs, liver, and spleen, were filled with hydatids. (See below *fièvre typhoïde*.) Are we not then justified in adding something to the doctrines of Pinel, Cullen, and Frank, in regard to fever, or in deducting something from them? As respects the extension of the doctrine of inflammation, which Broussais allows himself, the explanation of this is, that dissection decides nothing absolutely. While others, and even Abercrombie, have found great vascularity of the mucous membrane of the stomach, without being satisfied of the presence of inflammation, Broussais requires much less to decide upon its presence.

Andral will often describe as hyperemia or deficient nutrition what Broussais terms irritation or sub-inflammation. Andral, too, blames the reducent plan of Broussais in actual inflammation, and maintains that, in the advanced stage of fever, the good effect of stimulants may result from the asthenic condition of the whole system.

I know not exactly when the intestinal scissors were invented; but it appears to have been this instrument which determined Broussais to invest the new discoveries in the alimentary canal, due to the activity of his mind, with more importance and distinctness. In the intestinal canal is evidently found the nidus of his doctrine.

How great the authority of Broussais once was, is well known; it is now on the wane. When one sees him take his seat in the large hall of the school of medicine, in the red cap of the faculty, and his blue spectacles; how he directs his eyes to one spot, chafes more and more as he proceeds with the theme of irritation, and calls to his auditors, the number of whom fills only the first bench: "Why then, young men, is there no one among you with good sense enough to oppose this doctrine of general symptoms, so that science may march on—march!" he sees at once that the spell is broken. In the midst of his lecture new hearers enter the doors above and below, until the amphitheatre is filled. They are attracted, however, not by the eloquence of Broussais, but by their desire to obtain places for the lecture on internal pathology, which Andral delivers an hour later.¹

One who considers what would have been the history of French medicine without the appearance of Broussais' system will probably be led to the conclusion, that all the means existed before his time of bringing it to that condition in which it is at the present moment. Broussais imparted to the pathology of the alimentary canal, and to inflammation, an excessive importance, which has been diminished gradually, or is now in the progress of being so, to that just measure to which the regular progress of science would in time have brought them. Pinel formed his system in the true French spirit, as shown in the mathematics of Descartes and the sensualism of Condillac. The eternal contest carried on in the world between spirit and sensualism, power and matter, then decided itself in favour of the last. Hunter's theories and labours contributed to this end. Portal began to apply himself to the study of pathological anatomy, and, above all, Bichat opened a path in the same direction. This Bichat—whom, as Corvisart expresses it, Europe envies to France—who died in the thirty-third year of his life, is still the wonder as well as the idol of the French. He said: "To observe nature, to collect facts, to derive general principles from these facts;—who are we, that we should turn away from this path?" "What is observation," said he again, "if we do not know the seat of disease?" In a word, as Bichat introduced anatomy into physiology, and physiology into anatomy, so in the application of his views to medicine, which, alas, he did not live to make himself, disease gained a local habitation.

¹ The following statistic table will confirm the assertion of the diminished success of the Broussaian doctrines. In 1823, France still exported leeches to the number of more than a million. After this she exhausted not only her own supply, but also that of England, Germany, and Hungary, and has even drawn them from Moldavia and Wallachia.

	<i>Import.</i>	<i>Export.</i>
1820		1,157,920
1823	320,000 . . .	1,188,855
1827	33,634,494 . .	196,950
1833	41,654,300 . .	868,650
1834	21,885,465 . .	868,650

Whether French physicians now become blind partisans of Bichat, or whether, as generally happens, they have judgment to reject his extravagances, they at least stand on the general ground of localisation which characterises the medical science of the present day.

AUSCULTATION AND PERCUSSION.

In order to find the seat of disease, to estimate changes of structure during life, the physical signs which are determined by the sense of hearing, have been clearly studied in France. The investigation of these by Corvisart, according to Avenbrugger's plan of percussion, led, after Laennec's invention of the stethoscope, to unexpected results. Medicine, surgery, and midwifery, all found in this instrument important aid for diagnosis. Its adoption is general in France, scarce less so in England; but in Germany, for some unassignable reason, least of all. We have translated all the works on the subject, but made little practical application of them, and our literature can boast of but a single original treatise. To insist on the importance of auscultation and percussion, is hardly needed; no one has been found to entertain doubts on these points, who has once applied and understood them. It is well known, that both modes of hearing may be either mediate or immediate. In auscultation, we catch the active sound of the passages, and detect their physiological and morbid alterations. In percussion, a passive sound or echo is elicited by a blow. In auscultation, either the naked ear is applied, or the stethoscope intervenes, by which latter mode the sound may be heard in a more limited space, and from parts to which the ear could not be applied. In percussion, the fingers are applied to the bare walls of the chest, or another finger, or an ivory instrument, termed a pleximeter, is interposed.

As both these means of diagnosis have been most extensively adopted in France, the best judgment of their utility can be formed by reference to the state of medicine in that country. Auscultation and percussion necessarily bring into play living pathological anatomy, or, more properly, anatomical pathology. This is pursued at present in France with a zeal which appears to many to be too exclusive. We are reminded how the observation of the tongue, the urine, the pulse, have successively absorbed attention, and exclusively directed practice. In reply it is said that this was not the fault of the means, but of those who employed them. This physical exploration, too, applies itself more directly than the others to the symptoms of disease. The distinctness with which organic diseases of the bronchia, of the parenchyma, of the lungs, of the pleura, of the ventricles, of the heart, the valves, and pericardium, can be discriminated, affords, besides the advantage for diagnosis and prognosis, frequently another for the treatment immediately connected with it. This is more true of acute than of chronic disease; but in the latter, at least, the prognosis is rendered more satisfactory. To have such auxiliaries to determine whether inflammation of the lungs, of the bronchia, or of the

pleura—whether endocarditis or pericarditis is present, cannot but be desirable in the highest degree to the practitioner. These signs, too, inform us, not only of the existence, but of the extent of disease; how far tubercles have advanced; whether pneumonia is present; whether a cavity exists; to what parts of the pleural or peritoneal cavity effusion has extended; what alteration has occurred in the condition of the heart, organic or otherwise; whether the difficulty in breathing has an organic cause, or is only functional. They assist the accoucheur to determine the presence of pregnancy, the existence of twins, the life or death of the fœtus; they facilitate to the surgeon the diagnosis of swellings, whether these consist of water, hydatids, air or solid matter. These advantages are too obvious to need illustration. But to make these means still more acceptable to the practical physician, it may be added, that a knowledge of their application is by no means difficult to acquire, since the most important and useful indications are readily detected. In percussion, to distinguish the flat sound from the clear, in auscultation, to discover the crepitating sound of pneumonia, or detect the second sound of the heart, is soon understood, and its use appreciated. The more minute and nicer distinctions, it is admitted, require longer practice to understand; but in regard to these there is no certainty, even to the most practised ear. Two auscultators may differ in the interpretation of a sound which both detect; and it is admitted, *a priori*, that it is not advisable to make these nice distinctions. Thus, for example, the discrimination between bronchophony and ægophony is no longer held to be of practical use. Louis even reproaches Laennec with having abandoned himself to auscultation too much in certain cases in deciding on the existence of pneumonia; maintains that nothing positive can be concluded from crepitation, independently of other symptoms, as expectoration, &c., and that he himself, notwithstanding his practised ear, was sometimes unable to distinguish between the crepitating and subcrepitating râles (the signs of bronchitis and pneumonia). It is, indeed, acknowledged that auscultation and the other means of exploring are inadequate to a certain result, unless other symptoms are taken into the account.

The value of physical signs in determining diseases of the heart is, perhaps, as great as in the exploration of the lungs, although the results to be obtained are less certain than in pulmonary affections. That the diagnosis in the former case falls short of perfection, is abundantly proved by comparing careful and candid reports of cases with the subsequent autopsy. To illustrate the difficulty of this diagnosis, two considerations only need be mentioned. In regard to the causes of the second sound of the heart, no less than five distinct opinions exist; when, therefore, this becomes altered, or its recurrence irregular, we have no right to draw any certain conclusion from this circumstance. Farther, the position of the heart may, by hypertrophy and enlargement, be so changed, that the right and left sides of the organ, usually referred to the end of the sternum, and to the left præcordial region, between

the fourth and seventh rib, may vary so materially from these relations as no longer to be recognised.

From these considerations, it appears to be advisable and necessary to depend entirely on the more prominent signs. The physician will not be permitted in private practice, as in a hospital, to place his patient in unusual positions, and the application of the auscultating instruments may cause annoyance. The latter objection usually yields to habit, but it may often be met from the commencement by applying the ear to the back instead of the chest, while light percussion with the finger interposed is seldom objected to.

The improvement of the latter operation by the employment of a small plate of ivory, as above mentioned, is due to Piorry. There results from this, besides the resonance of the chest itself, the peculiar sound of the substance employed, which, when once understood, can create no confusion. An advantage, however, arises from this source, that the percussor has a sensation of resistance, and thus the thickness of the organ below, and its degree, can be judged of by the sound. In this manner, the thickness of the liver, or of any tumour lying below the parietes of the abdomen, can be inferred with some approach to accuracy. Piorry formerly laid down certain distinctions respecting the various shades of resonance, but omitted these in the second edition of his treatise on the subject, as tending to increase the difficulties of the learner. Simplicity, on the whole, seems to be the best rule.

One injurious effect may here be noticed, which is liable to follow from both methods of exploration, but by which the value of the science itself is by no means impaired. This is a passion for post mortem examinations. A passion of any kind may be injurious when indulged to excess, and this is the more to be feared, as it throws treatment too much in the back ground. Curiosity, and particularly a desire to know whether the diagnosis given was correct, must often cause the autopsy to be expected with impatience, and the consequence, though wholly unperceived by the practitioner, must be, that the real object, the restoration of the patient, will be more or less lost sight of. This is particularly unfortunate for French practice, which is already feeble enough, and their want of attention to this point appears the more natural, when we remember that a lively temperament and want of circumspection are respectively the cardinal virtue and leading fault of their national character.

Andral, Louis, Bouillaud, Chomel, Piorry, Reynauld, and Fouquier, are seldom seen visiting their patients without a stethoscope, and as they have the opportunity to acquire great skill in their hospitals, other physicians are induced to call them in consultation in cases to which this important aid of prognosis and diagnosis is applicable.

LOUIS AND THE NUMERICAL METHOD.

Louis, now one of the most esteemed French physicians, was from his seventeenth to his thirty-third year in Russia, where he studied and practised. He made while there the oft-repeated observation, that a great disproportion exists between the multitude of theories, and the small number of observed facts. Accidental circumstances called him back to Paris. He became acquainted with Broussais and his doctrines, followed assiduously in his footsteps for a considerable time, and satisfied himself that while Broussais clearly proved others in the wrong, he was very far from being always in the right. On this Louis came to the determination to devote himself as closely as possible to pure and simple observation. He gave up practice, entered Chomel's ward in La Charité, and carried out his purpose like a solemn vow. He passed, as he tells us, from three to five hours daily in the hospital, and each autopsy employed him fully two hours. He collected the histories of one thousand nine hundred and sixty cases, and the post mortem appearances of three hundred and fifty-eight. These formed the basis of his work on phthisis, which at once raised him to the highest rank among medical writers. At first his scrupulousness was ridiculed; but when he came forward with the results he had obtained, every doubt vanished, his practice attracted notice, and from that moment dates that pursuit of statistic comparisons which distinguishes the Parisian schools. For the last six years Louis has been a physician at La Pitié, and, though not a member of the faculty, holds a clinic on his own account, which is attended by a numerous audience, especially of strangers. He says: "Whenever I have formed an idea *à priori* without analysing the facts, I have always (?) found after this analysis that my *à priori* conclusion was false." With this strict impartiality he proceeded to the observation of acute disease. In 1826 appeared his "Anatomico-Pathological Researches in several Diseases," then his "Gastro-Enterite" and "Typhoid Fever," containing minutes of three hundred post mortem examinations, and more than nine hundred cases. He has now become an opponent of Broussais, and a partisan of Laennec.

This numerical accuracy, however, to which Louis was led by his honest zeal, and his upright opposition to uncertainty, must be regarded as especially favourable to the progress of medicine. He has given it the peculiar title of numeric method, under which it has attracted well-merited notice. In recounting the symptoms of disease, and the appearances on dissection, he furnishes trustworthy materials for forming conclusions, and recent conclusions are worthy of confidence because the product of simple induction. Thus he found that phthisis almost invariably commences with tubercles in the upper lobes—that it is more frequent among women than men—that pneumonia is more easily resolved in tuberculous than in sound lungs—that simple bronchitis commences at the base of

the lungs, and follows a course the reverse of phthisis—that chronic peritonitis indicates tubercles in the lungs—that tubercles are scarce ever found in any other part without being at the same time in the lungs—that acute affections, occurring without complication, mostly seek one side of the body, or are limited to one part of a single organ. But he expresses himself more accurately. He obtains the results that two out of three fatal consumptive cases exhibit hemoptysis; that women are more subject to hemorrhage than men, in the proportion of three to two; that in typhoid fevers diarrhœa occurs in twenty-nine out of thirty cases, ulceration of Peyer's glands in five cases out of six, and that changes in the mesenteric glands are a constant symptom.

In this manner he has not so much made complete discoveries as shown the proportions in facts already known; he has not so much discovered new truths, as settled old ones conclusively. For this purpose he adopts the course pursued in mathematical and physical sciences. Like a meteorologist he observes the symptoms of the patient, minutes them, arranges them in a tabular form, compares them, deduces his results from the calculation, and the average number gives the new discovered truth. His examinations last an hour, and he investigates the visible remains of silent death with inexhaustible patience; not only the external form, colour, consistence of the organs are noticed, but with equal exactness the parenchyma is sliced through and carefully inspected. He opens the intestines with scissors, and allows them to pass through his hands from above downward; with close attention he examines every successive part, dictates the appearances, and allows nothing to escape him.

Such zealous honesty, which can never be sufficiently imitated, and which promises so much, does not however promise every thing. The numerical method increases the exactness of those results which we owe to the labours of good observers, as Sydenham, Boerhaave, De Haen, Stoll, Frank, when these were expressed in general terms, as “frequently” or “seldom;” but this accurate knowledge is limited to the observer himself, unless we can have the formalities of legal investigations applied to medicine. The numerical method assures us of the observations which have been made, but by no means assures us that nothing has been overlooked. It authorises us to draw conclusions from duly arranged numerators and denominators; but he who has the patience to count, has not always the talent to observe and to see correctly, or the tact to establish wide and generally useful conclusions.

TYPHOID FEVER.

If I do not greatly err, Chomel assigned its name to typhoid fever, after he had written on oriental typhus. Typhoid fever is now attracting especial attention in France, yet it is not easy to form a correct idea of its nature, or how extensively the term is to

be applied. Chomel takes a wide range, and includes in it all those forms of fever which have been represented as continued fever of inflammatory, bilious, mucous, adynamic, ataxic, or slow nervous type; in other words, as *fièvres continues graves*. Many other names are assigned to it, as *fièvre entéro-mésentérique*, (Pinel the younger and Serres); *exanthème intestinal*, (Andral); *dothinentérite*, (Bretonneau); *ileodichlidite*, (Bally); *entérite folliculeuse*, (by others); *gastro-enterite*, with nervous affection of the brain, (Broussais). In Germany the names of *typhus abdominalis*, and *febris intestinalis ulcerosa*, have been given to it. My object here will be to illustrate some of the results obtained by Chomel, most of which, it is true, are already known in Germany, and have been there subjected to examination.

The typhoid eruption, or *taches rouges*, the rose-red papulæ, appear mostly on the abdomen, sometimes sooner, sometimes later; are often indistinct, sometimes wanting; the last in sixteen cases out of thirty. Frequently they are so faint and so scattered, that an express search is necessary to find them. They are distinct from the proper petechiæ, as they can be removed by pressure; and distinct, also, from the *sudamina*, which appear with marked sweating, and are rather to be termed *miliaria rubra*.

The anatomical changes in the canal are the following: In the first stage of the fever we find enlargement of the glands of the mucous membrane. The glands of Peyer (not rather vesicles?) appear more closely set, and resemble large elliptic plates (plaques) granulated, more numerous in the ileum or jejunum, never in the large intestine. The glands of Brunner, more scattered, are also found sometimes enlarged, and then also in the large intestine. These plaques, from one to three lines in height, exhibit, on cutting through them, a yellowish white mass. The mucous membrane itself offers less alteration. The mesenteric or lymphatic glands always exhibit an enlargement.

After death in the second period, we discover ulceration of the intestinal glands. Those granulated plaques have disappeared, and in their place is found an excavation—a want of mucous membrane in these spots, or the membrane remaining in fragments. The appearance of these pits is waffel-like, reticulated, sometimes elliptic; their size is from two to three lines in diameter, their colour red or yellow from bile. They also extend deeper, and may even penetrate the peritoneal coat. Even the glands of Brunner may be ulcerated, which, however, is more rare.

In the third period or stage, when death has not supervened, follows cicatrisation or healing by resolution. Besides these essential anatomical changes there are also accidental ones, partly in the alimentary canal, partly in other organs.

Respecting the treatment Chomel remarks, that no one method, even the rational, has adapted itself to the forms and periods of the disease, or obtained a decided preference to others in regard to the result. He goes through the old evacuating, antiseptic, exciting, stimulant, weakening, contra-stimulating, and antiphlogistic me-

thods. He then directs the treatment adapted to the different forms. In the inflammatory he advises strict diet, venesection, leeches; in the bilious acid form, also, venesection, but not vomiting, and seldom purging; in the mucous form, bitters and weak aromatics; in the ataxic, tonic means; in the adynamic, strengthening remedies, as cinchona, wine, camphor; in the perforation of the intestine, large doses of opium and entire rest, (the English method of Graves and Stokes).

But this is only his theoretic rational therapia. He now employs, in preference to others, a remedy recommended to him by a pupil, (but first applied in Ireland by Reid,) the chloruret of soda. (It is our liquor natri chlorati. It is also found in the Pharm. Hanov. as Labarraque's liquor, with directions for preparing it, and for its employment as a disinfectant. Chemically, it resembles the chloride of lime. It is sometimes improperly translated in German as kitchensalt.) He gives this in the French manner, as a potion in sirop de gomme, about one and a half grains to the ounce, and allows sixty ounces to be used daily, ten to twenty-four drops in a potion, and the remainder, as far as possible, applied in other modes, as clysters, cataplasms, bathing, sprinkling the bed, and placing bowls containing the solution under it. He considers this as opposed to the tonic remedies, but does not express himself clearly in what class he arranges it, or how he explains its operation; whether it is antiseptic or antimiasmatic, or whether the ulcer of the intestines is immediately cured by it. At all events it is distinct from the free chlorine in the aqua chlorata, which is recommended in Germany in abdominal typhus. He applies it only in severe diseases, and only in the first and second stages. The five first patients for whom he tried it were all cured, while among fifty-one others not treated with it, one of three died; afterwards, among fifteen treated with the chloruret the deaths were two only. After this the proportion changed, and in spite of his application twelve of thirty-seven died, or one in three. Another method of treating typhoid is that of Piedagnel, who pretends to have controlled the severity of the disease by frequently repeated cathartics, by the operation of a glass of seidlitz water daily with strict diet. He has in this way lost but one in fifteen patients. This is confirmed by Delaroque, in the Hospital Necker. Fouquier, in la Charité, gives alum from twenty-four grains to a dram daily, in emulsion, in a julep, or in pills. Bouillaud terms his practice rational; but, as an especial adherent of Broussais, places leeches in abundance on the sensible part of the abdomen. Here again we see the fault which is so often committed in French medicine; it looks for a remedy for a given disease, and, disregarding the peculiarities of the case, is often unable to assign a reason why the treatment fails or succeeds.

Chomel himself must be willing to concede that he is not wholly clear in the comprehensiveness which he assigns to the idea of typhoid fever. In describing it he gives almost a complete pyretology. In his early essay "On Fevers and Pestilential Diseases,"

he came out as an opponent of Broussais. But Broussais himself says, that in this may actually be found a confirmation of his doctrine; that his adversaries, Chomel and Bretonneau, in their typhoid fever or dothinerite, have exactly described his gastro-enterite, with typhous symptoms, produced by affection of the brain, and that the circumstance of the mucous glands being especially prominent in their cases, is of little importance. But as Chomel has now determined to stand by his early defence of Pinel's essential fever, he makes the following distinction; that the glands of the mucous membrane do indeed exhibit inflammatory signs, but that the severity of this affection is not proportionate to the general symptoms; that there are cases in which no lesion of the alimentary canal can be discovered, (this is said also by Andral and Louis); that he regards the inflammation of the intestinal glands as secondary, and that the original disease may be a concealed affection in the nervous system, or in the fluids of the body. We see, therefore, what could hardly have been anticipated, Chomel labouring to escape the imputation of adherence to Broussais. But how vague the jurisdiction of typhoid fever every one must be sensible. For the rest, Chomel regards it as contagious; and in 1834-5 many young medical men sickened and died of this nervous fever.

ANDRAL.

The public are already acquainted with Andral's *Pathological Anatomy*, his *Clinique Médicale*, his *Essay on Vitality*, published in 1835, and at this moment his lectures are making their appearance. He was about thirty years old when chosen professor of pathology in the faculty. The large lecture-room is always filled, when he officiates, not with students only, but likewise with older physicians; and he always commands attention, when speaking in the academy. As his doctrines are peculiar, and constitute an epoch, they may be termed a school. Especially is he the man, who, although the author of an excellent compend of pathological anatomy, has divorced science from localism and materialism, and directed attention to vital properties. If the ancients generalised too much, and the moderns have carried localisation to an extreme, Andral has the merit of uniting the merits of both. He divides diseases into organic and functional. It is impossible, he says, to form to one's self a perfect representation of disease; but, however this may be, the solid parts and the blood are the inseparable elements, and, in turn, the cause and the effect of their mutual changes. Accordingly, he treats in his lectures first of the diseases of the solids, then of those of the blood. Of the former, there are five classes—diseases of the circulation, secretion, nutrition, innervation, and function. These, together, constitute the local diseases. Each organ reacts on each other, and the extension of disease is effected either through the circulation, through innervation, or sympathy, which last is not explained by the two others.

So much for his theory. But he is equally distinguished as a practitioner. As he does not so easily admit an inflammatory condition, he is more guarded in the employment of leeches. He is of opinion that the stomach may be the seat of a series of morbid conditions, not of inflammatory nature, and which, being of various kinds, demand various treatment; conditions which, not yielding to antiphlogistics alone, require narcotic means, tonics, excitants, antispasmodics—as rhubarb, gentian, cinchona, iron, zinc, bismuth. He has also, very properly, restored emetics and cathartics to their former consideration. He has proved, that the salts, calomel, jalap, aloes, and croton oil, are not so prejudicial as had been imagined in France. There is, in fact, even now to be remarked among the French, a certain naïve wonder at the operation of these articles, when they show themselves useful in headache, neuralgia, catarrh and suffocation, measles and scarlet fever.

He has also made numerous experiments with other especially new means. He employs chlorine in phthisis—with little effect indeed—iodine and hydriodic acid, iron and alkali. He also applies the contrastimulant method, with its large doses of emetic tartar, acetate of lead, nitrate of potass, aconite, digitalis. What is most worthy of remark, is the still increasing wonder of his countrymen, that the mucous membrane of the stomach and intestines will bear this treatment.

Let us once more briefly consider the present condition of French medicine and therapeutics. The French physician, who visits the bedside of a patient, treats him according to the following method: he first, with a perfect knowledge of anatomy, divides his body into the various systems of Bichat; admits, more or less, with Broussais, that one of these is suffering from inflammation; what the character of this is, what its seat, how great its extension and degree, he investigates with all his senses, especially by touch, and with the aid of auscultation and percussion, with a degree of accuracy in which Louis is a pattern; then directs abstinence, more or less mild remedies, antiphlogistic and revulsive treatment; and if death ensue, he investigates, by pathological anatomy, how far his diagnosis was correct, in conformity with the ample instructions of Andral, Curveilhier, and many others.

The part of the diagnosis which can be established by dissection, the recognition of organic alteration, is carried to a surprising extent. Its perfection springs out of their especial fondness for post-mortem examinations. On these examinations reposes all the pathological anatomy of the French. They have little interest in preparing perfectly and preserving pathological discoveries or representations of normal anatomy. Neither the museum of the school of medicine, nor the Dupuytren museum, founded the last year, is yet sufficiently extensive. Their materials are fresh cases. Their great object is to see structural changes immediately connected with the history of the sick, for the attainment of which, the numerous deaths in so large a city, and the little opposition made to their being opened, afford abundant opportunity. Their sense,

however, of the importance of collections, which afford a general view, which preserve singular cases, and make the more frequent, at least in part, more evident by careful demonstration, is proved by the Dupuytren museum, to which Orfila, the dean of the Parisian faculty, is still preparing a rival at Clamart, the great place of dissection at Paris. Skill and exactness in opening bodies can hardly be carried farther than they are in France. Though we do not find that the knowledge of normal anatomy is greater among Parisian than German students; although in their preparatory exercises they trust too much to themselves, or to their manuals, of which that of Hippol. Cloquet is most approved; and although the applications, especially that to surgery, are neglected, yet have they the advantage in pathological anatomy. Their claim to the invention of those useful instruments, the rachitome, the enterotome, &c., is well known. A body is sometimes opened in front, sometimes behind or on the side. Thus, in a patient who died of scarlatina, with angina, the head was divided from above downwards, to the breast and thoracic viscera; and in a case in which urethritis had existed, the pelvis and the urinary organs were opened sideways, and the urethra and bladder neatly slit up.

The treatment, the ultimate object to which all this medical science should be considered as auxiliary, appears in France to be in a great measure subordinate to it. That the doctrine of Broussais admits almost no internal remedy, is well known. The English long since said to the French, that they permitted their patients to die, while the French charged the English with killing theirs. When you hear the prescription in a French hospital, you are astonished equally at the severe regimen and the absence of medicine. A quarter of a portion, a loaf, a soup, decoction of rice, syrup of gum, frequently form the nourishment, or rather the vehicle of the remedy. Then there are regular potions, tisanes, liniments, decoctions, cataplasms, pills, frequently bearing the same name in different hospitals, while their ingredients are varied, such as calming potions, potions béchiques, spasmodic potions, &c. Remedies which do not demand a small or very exact dose are taken in the form of a particular drink. The patients are kept so low, that those with chronic diseases often entreat the physician, while he dictates his prescription for the day, for another quarter portion, or an additional loaf. Nay, they actually have often pain in the bowels, caused by hunger. The quantity of potions, too, which are administered, cause disgust, so that more cures are effected by this means and by hunger, than by the remedies employed. On the other hand, lavements of various kinds are in very frequent use—as purgative, laxative, astringent lavements, camphorated belladonna l., oxymel l. Since, as above remarked, each hospital has its peculiar compositions, it is impossible to follow the prescriptions without consulting Ratier's formulary (*Formulaire Pratique des Hôpitaux Civils de Paris*). In this work will be found a large collection, a small proportion only of which are used at present, generally the mildest, and those which

have been tested by long experience. Every French physician is at least so much controlled by the doctrines which Broussais has so earnestly inculcated, that he always regards the alimentary canal as in an irritable state, and laments to find himself compelled to abstain from the more active internal treatment. When the neutral salts, or calomel, or opium, or antimonials, are used, it is commonly only by way of experiment, and the preference, which for a time is conceded to one, is soon transferred to another.

French pharmacy deserves much credit for its elaboration of the recent discoveries in chemistry. Medicine has availed of these also, and not unfrequently with good effect. In this, however, again appears evidently the great fault of French therapeutics. It seems, in fact, to spring out of a national defect in character—a want of comprehensive and enlarged views. The Frenchman sees the individual fact, but seldom remarks its relation to other facts, and can with difficulty imagine himself placed in a new combination of circumstances. As this is the cause why he finds it so difficult to form a correct idea of the peculiar traits of other nations, and why he is so little successful in forming friendships with foreigners and colonies in other lands, so is it among physicians the cause of a therapeutic defect. An impression which once takes possession of their minds, is applied to all cases of disease, without being modified to suit their respective peculiarities. Accordingly, they repeat the same general theories, and reapply the same remedy to the same disease, although circumstances may render it much less appropriate; and when, in estimating the effects, they find them not always favourable or unfavourable, they mistake or overrate some new recommendation, and readily change one mode of treatment for another.

It would seem, farther, that they not only overlook treatment in their zeal for diagnosis, and lose the special in the general character of the disease, but that they too often forget the person of the patient; they work rather for the conquest of the disease than the restoration of the individual; in fine, they neglect the general constitution of the body in seeking the locality of the affection. They will continue to draw blood from their pale and starving patients, when a more rational view would teach them so to direct their treatment, as to counteract the debility of the whole system.

We may venture, then, to pronounce the opinion that French medicine stands distinguished in anatomico-pathological diagnosis, but falls behind in therapeutics. It is evidently at this moment neglecting the end for the means, or, in seeking its end, has in view the disease rather than the patient.

RICORD'S EXPERIMENTS AND PRACTICE IN THE HÔPITAL DES VENERIENS.

Few medical travellers will visit Paris, without seeing Ricord in his service at the Hôpital des Vénériens, where he so willingly

communicates on the subject of his new observations and his surprising experiments. As the accounts which he has given of these are scattered in separate journals, and a collection of them, under the title "*Mémoires et Observations par Philippe Ricord*," 1834, neither presents them complete nor accurate, partly in consequence of the want of full information in regard to them at that time, an abstract of his results will be given here.

These results relate to the syphilitic poison, especially as communicated by inoculation; to blennorrhœa from the parts of generation, the diagnosis of which has been much improved by the use of the speculum vaginæ; and to the treatment.

Inoculation with matter taken from syphilitic ulcers, bubos, or discharges from mucous passages, has thrown much light upon the dark points in the nature of the disease. It is performed on the same subject in another place, best on the inside of the leg, and the occurrence of a pustule, its course and form, determine the nature of the affection. Ricord takes pus or purulent mucus, and inserts it with a lancet under the epidermis. Twenty-four hours afterwards appears a slight redness and rising of the cuticle; the second day the point is still more prominent, is surrounded by an areola, and assumes the conical form of a small pimple, with a dark point of dried blood on the extremity, the effect of the inoculation; the third day, the epidermis is distended, with a little semi-transparent yellowish serosity, and forms a pustule; the fourth day, this assumes a rounded form, the black point is sunken in like an umbilicus, the areola gradually loses its lively red; the fifth day, the circumference of the base of the pustule is somewhat swollen and hard; the sixth day, the matter thickens, and the pustule dries under a crust which forms concentric layers. This crust remains a longer or shorter time, and, when it falls off, exhibits an ulcer, which has all the characters of a primary syphilitic sore or chancre. There were generally three insertions made, and either all took or none, never one alone. If they go on, and form in the manner above described, they prove the syphilitic character of the primary sore; in the opposite case, they prove either its non-syphilitic nature, or that the infection has become a lues secondarily or consecutively. Inoculation has shown that, after five to seven months, chancres and bubos still retain their syphilitic character. As matter of infection, was taken the discharge from chancres on all parts of the generative organs, in both sexes; the matter of urethral blennorrhœa; the discharge from the vagina, uterus, and anus; from bubos in various stages; from papulæ, pustules, tubercles, and ecthymatous eruptions; from sores of the cervix uteri; of the lips, cheeks, throat; of carious bones; and of various morbid growths. On the other hand, venereal subjects were inoculated with the matter of scrofula, herpes, acne; with the discharge of cancer and of gangrene. Ricord considers chancre a perfectly characteristic symptom of syphilis; as decisive and as specific as small-pox or cow-pock. It comes from a specific virus, the action of which is uniform and regular, and can be reproduced at pleasure

by inoculation. The bubo following on chancre, is either sympathetic or idiopathic. In the last case, it is a gland chancre (ch. ganglionaire), identical with chancres, and can by inoculation produce a chancre again. Ricord has arrived at the conclusion that gonorrhœa has a distinct character; syphilitic infection produces only a sore; and if inoculated blennorrhœa takes the character of syphilis, there must be a concealed sore combined with it. Blennorrhœa never develops chancre. Farther researches, especially if instituted by others, promise more satisfactory and extensive results. The conclusions of Ricord are confirmed by A. Thompson, an Englishman, who for a long time observed with him, and shared and perfected his experiments. (See Lond. Med. and Surg. Journal, 1833, Oct. 26.)

At the same time with Ricord, but independently of him, Wallace, in Dublin, carried on similar investigations and experiments. The accuracy of Ricord's observations has been called in question by Rattier, an externe of the hospital. He himself regards his investigations, as brought before the Academy of Medicine in July, 1833, as still inconclusive, and has not adopted them into the collection of his published works, above noticed.

Ricord has invented an excellent means of examining the female organs in his speculum vaginæ. It is a great improvement on those of Recamier and Lisfranc. That of Lisfranc is a simple hollow cylinder; that of Ricord is a cylindric instrument, of copper covered with tin, which is split lengthwise, and by means of a joint in the middle, allows the front and back edges to separate and come together. Two handles keep it in place, and a screw determines the degree of separation. In the application of this instrument, one is taken by surprise on discovering that a complete examination may be made of the internal female organs. The whole vagina, and the mouth of the uterus, are by it brought plainly into view. In the bottom are often found ulcers remaining, although those in front were healed, or excoriations, fungous growths, and enlarged mucous glands, which kept up the discharge, or it is ascertained that blennorrhœa of the uterine mucous membrane exists. On Tuesday, which was at once the day of reception and of *polyclinique* for women, might be seen in the Hôpital des Vénériens, the application of the instrument to thirty individuals in a single day. They are laid on a high bed, near the edge, the feet sustained on two stools. While two fingers hold open the labia externa, the speculum, covered with cerate and closed, is introduced lightly and quickly, unless great sensibility or a hymen prevent. There is seldom any pain felt or even pretended. The two handles are now pressed together in front, so that the opposite ends separate and discover the canal. A light is held before, and the spectator sees the os uteri as plainly as can be desired. If menstruation is present, the discharge is seen exuding by drops from the slightly swollen and reddened os tincæ; an occurrence on which Osiander, who accidentally witnessed it in consequence of a procidentia uteri, congratulated himself as a

rarity. Deviations from a healthy state are often detected in this way, and it is not only easy to determine their character, but to apply remedies, to make applications solid or fluid, and even, by means of a peculiar syringe, to throw injections into the uterus.

Treatment.—In primary ulcers, Ricord touches the sore with caustic, in order to change its character to that of a simple ulcer. Mercurial means constitute the favourite practice in cases where obstinate sores refuse to yield to other treatment. An unusual hardness of the edges is the usual precursor, when secondary symptoms are to be developed. Ricord imagines that quicksilver proves a specific in a number of cases of secondary symptoms, but that it rather removes the effects than the cause. Some cases prove wholly intractable without mercury. Those cases, in which mercurial means are indicated, heal by these means more quickly than by any others, though generally capable of being cured otherwise. In secondary syphilitic symptoms, mercurial remedies form the rule, antiphlogistics, sudatories, revulsives, the exception.

In consecutive affections, he gives the proto or deuto-ioduret of mercury. He considers mercurial salivation as a consequence of a peculiar inflammation of the palate, tongue, and gums, which he terms mercurial stomatitis. The salivary glands are attacked only secondarily. There is both an acute and a chronic form, and on the last he lays particular stress, as it may interchange with syphilitic affection and with mercurialism, of which last it may often be the commencement. In bubos, he applies poultices of iodine, and has made some successful trials with blisters. In gonorrhœa, which, according to him, as above mentioned, is not identical with syphilis, he first commences with antiphlogistics, then gives cubebs and copaiva, then injections of lead, zinc, (acet. zinc 3j. aquæ 3x.) or lunar caustic (nit. arg. gr. j. aq. 3j.); warts are removed by the scissors, and excoriations behind the glans after gonorrhœa are destroyed with potass. In the blennorrhœa of women, he makes injections of nit. arg. gr. j. aq. 3j.; but as these seldom penetrate sufficiently, he applies lint, soaked in a solution of acet. plum. 3ss. to ℥j. water (eau blanche), and in chronic cases of double this strength. This mass of lint is renewed daily or twice a day; but if the mucous membrane of the vagina has a pale relaxed appearance as of unsound granulations, he applies in the same manner a mixture of eight or twelve parts of water to one part of the liquid acid nitrate of mercury; (R. hyd. nit. 3j. ac. nit. 3j. M., which is a caustic solution applied by Jules Cloquet and Recamier to ulcers and to cancer,) allows it to remain from ten minutes to an hour, and then substitutes the above leadwater.

Sometimes, after introducing the speculum, he touches the excoriated parts of the uterus with a sponge, moistened with the above caustic, and fastened on the end of a staff. In blennorrhagy of the uterus, when a large amount of tenacious, glassy mucus comes from the os uteri, he makes injections of the acid mercurial solution into the uterus. He uses for this purpose, a peculiar syringe which contains two fluids. He injects the solution first to

the amount of about a tea-spoonful, allows it to remain a minute, and then sends in warm water. The injection first creates heat and slight pain in the part, which pass off without ill consequence. The majority of three hundred patients thus treated, required three injections in eight days. With this plan Ricord has been much pleased. If the mucus is small in quantity, thick and tough, this is not always to be considered disease, as it may happen through catarrh. The speculum shows the redness of the os uteri, but this colour is not necessarily morbid, especially when the parts are distended by the instrument, as the lips of this organ are always red within. Small syphilitic sores or granulations on the os uteri easily bleed on being touched, and must, therefore, be discriminated. The carunculæ myrtiformes must not be confounded with fungous growths. After syphilitic affections of the throat, there may be some sensibility of the part for years, which is not to be removed. Removing the tonsils is useless, and is sometimes followed by increased secretion of mucus. Men of anxious temperament, thus affected, always consider themselves sick.

He terms the lighter form of discharge, blennorrhœa; the severer, blennorrhagia; the severest is the folliculous blennorrhagia, in which the mucous glands are hypertrophied. A blennorrhœa may be contagious, that is, communicate the same disease to another individual. The view taken by Ricord is, that many individuals have little susceptibility, or that two can accustom themselves to the disease in each other, so that a communication takes place once, and nothing follows afterward. This he calls acclimation. When two persons are physically uncongenial in this respect, you often hear him give the advice to change husband, or wife. On Tuesday, numbers of women come to him, perhaps preparatory to marriage, to convince themselves by means of this famous speculum of their own freedom from disease; and on Saturdays, men attend in the same view. Among them are persons who cannot be made to believe that they are not affected with syphilis; they labour under syphilomania. How far the speculum vaginæ is applicable to private practice, each one can judge for himself; but its use is very instructive.

PHRENOLOGY AND ORTHOPHRENY.

It may be a matter of surprise, that phrenology, which first made its appearance in Germany, as craniology, or the science of the skull, and was afterward taught and discriminated by Gall and Spurzheim, in France, England, and America, should have been wholly given up in its native country. This indifference is the more remarkable, when it is considered that many other German notions, of much less plausibility, find favour and success at home. The history of the extension of this doctrine by Spurzheim, is such as would reflect credit on the soundest science. In Paris, London, Edinburgh, Dublin, and afterward in America,

which he visited, he overcame powerful opposition and gained distinguished adherents.

There is in Paris a phrenological society, which counts at least Broussais, Andral, and Bouillaud among its members. In England there are several, and one in London, having Elliotson for president, while Carmichael in Dublin, and Maekintosh and Combe in Edinburgh, profess themselves believers. The society in Paris publishes a journal, the "*Journal de la Société Phrenologique*," conducted by a committee, the chairman of which is Dr. Gaubert, and Dr. La Corbière is editor. This has now reached its fourth year. Broussais, this very year, has delivered lectures on phrenology, at which the number of auditors was so large that the hall could not contain them. There must, therefore, have been more than fifteen hundred present.

Phrenology now is no longer the simple doctrine of Gall, from which we derive benefit only for the anatomy of the brain. While it holds out as its object the anatomy and physiology of the brain, in their relation to the soul, it is at the same time a physiological doctrine, and a philosophical system. As a physiological doctrine, it rather explains the anatomical condition from the phenomena of the soul, than determines the physiological phenomena from the organic constitution; but, at all events, it arrives at its conclusions by collecting particular facts. The doctrine has the peculiarity, good or evil, that it is sufficiently popular, attractive, and intelligible, to amuse and interest the mass. Ladies are zealous phrenologists, and you find in London many a parlour ornamented with a phrenological bust. It is not, indeed, applicable to any practical use in common life, because, as its partisans freely admit, it is not sufficiently complete. It passes from anatomical structure immediately to mental phenomena, without especial regard for physiology. Whether it contributes any thing to medicine, especially to the pathology of the nerves, while it opposes itself to the physiology of the nervous system, now so zealously pursued, is a question.

Joubert, in Lyons, published a book in 1835, under the title, "*Prodrome d'une Nouvelle Doctrine Médicale*," and in this is found the following account of it. According to him, each apparatus (appareil) in the body consists;—1, of a part of the brain, which furnishes all that there is in its functions of the intellectual or instinctive character; 2, of a part or several parts of the spinal marrow; 3, of the external organs. In applying this to the respiratory apparatus, he makes this to consist; *a*, of a place in the brain, a cerebral organ, which suggests the necessity of breathing, and judges of the quality of the air in contact with the nostrils; *b*, of the part of the spinal marrow, from whence the respiratory nerves take their rise; *c*, of the external organs of respiration and circulation. He places this cerebral organ in the cerebellum, and terms it respirability. It is evident that in this way the two doctrines are not destined to coincide.

The Parisian school, however, admits at present in all, thirty-

seven mental peculiarities, and cerebral organs to correspond. These are either affective or intellectual. The affective consist of eleven propensities (penchans), and twelve feelings (sentimens); the intellectual of twelve percipient (perceptives), and two reflecting (réflectives). The Edinburgh school varies this arrangement.

Materials for the improvement and confirmation of the science are furnished by investigation of certain well known characters, distinguished for good or for evil, and whose peculiarities are matter of history. We find it announced, in connection with the organ of firmness, "great in Gregory VII., Charles XII., Richelieu, Napoleon, Casimir Perrier, La Mennais;" under veneration, "great in Robert Bruce and Raphael, wanting in Dr. Hette, great in Walter Scott, Benjamin Constant, La Mennais, Lamartine; little developed generally in the French;" in form or configuration, "great in George III.," whose remarkable recollection of persons is well known. Sometimes an impartial investigation discovers a coincidence with the occupation of the individual, but not always. The science, however, does not profess to be perfect, and even the busts and heads exhibited are not all perfect examples. Some years since, M. Voisin commenced the application of his art to the living. In 1828, he obtained permission to pursue his investigations at the Bagnio at Toulon. He found there three hundred malefactors, thieves and murderers, mixed; but among them were distributed twenty-two condemned for rape, and his undertaking was to discriminate the last. Silently and before four witnesses, he felt for the organ of philo-progenitiveness in the back of the head, and thus detected, not indeed all the twenty-two, but thirteen of the number. There remained nine, in regard to whom he had deceived himself. The result, with which he might reasonably be contented, is published in the Jour. Phren., for Jan. 1835.

Orthophreny.—Although, as above remarked, phrenology is hardly ripe for application, one individual has been found sufficiently confident and enterprising, to apply it to the education and treatment of those depraved in mind. Felix Voisin has had, since 1834, an orthophrenic establishment, where by moral means, both internal and external, he attempts to do that for the understanding, for the development of the affections, and for the correction of dangerous propensities, which others have done for (other) personal deformities. Thus far he promises only, but has brought nothing to pass. He divides the children, who require orthophrenic management, into two classes:—1. Idiots (enfants nés pauvres d'esprit) with a conformation of brain below the usual average.—2. Children with sound cerebral organisation (nés comme tout le monde), but whose minds are perverted by defective or false education.—3. Those with unusual organisation (nés extraordinairement), in whom a disproportion exists between the good and the bad propensities, which he raises or depresses in their organs.—4. Children with propensity to alienation, to mental perversion, and to other nervous diseases, especially through hereditary influence. He has adopted in his own sense the expression of Descartes, "that if it

is possible to perfect the human race, the means of so doing are to be found in medical science." He is the physician of epileptic and idiotic children in the Hospice de la Rue de Sévres, and has a private insane institution in Vanvres, while this orthophrenic institute is situated at Issy, fifteen minutes' walk from Paris. Last year it contained from seven to nine individuals. He says, that he places his establishment next to that of the Abbé de l'Épée. That such an establishment should meet with opposition was to be expected, and accordingly it has been denounced by the celebrated Le Mercier, in the academy of sciences. Others, again, agree with him.

As a philosophic system, phrenology is not exactly to be termed materialism; it should be regarded only in a psychological view, and, thus viewed, is not without value as a means of collecting observations. It stands on neutral ground in the eternal contest between body and soul, at least so far as to embrace the termination of the corporeal, and the first commencement of the spiritual. One thing must be conceded to the phrenologists, that none better explain the otherwise inexplicable difference of opinion, when similar arguments on both sides are presented to all; how the same array of evidence may produce acceptance and rejection, belief and disbelief. They point to the organs on which depends the disposition to both; it is with them organic conviction, organic doubt; if this view of the subject is repelled, they point again to the organs of the two opposite propensities; it is still organic credence or organic scepticism.

In reflecting on the soul and the brain, we have at least no other organ or means for the purpose, than precisely these. So with our eyes we can see all else sooner than the eye itself, with a hammer we can strike, but not the hammer, and Archimedes acknowledges that, in order to move the world, a point must be found exterior to it.

CHAPTER IV.

ENGLISH MEDICINE.*

Character of English medicine—Application of mercury, venesection, purging—Other therapeutic views and practice—Influence of climate—Rheumatism of the heart—Hay fever—Bathing places—Quacks—A letter; the opening of a mummy—Homœopathy in England—Oxford—Sea sickness.

A little philosophy adopts prejudices, a fuller philosophy rejects them again. One seems to meet these words of Bacon every where

* In this chapter, as also in the sixth, I have made such use of a journal, which my father kept during a visit to England and Scotland, in 1814, as my purpose to present only what was new would permit. That the materials of that journal were then prevented, by unfavourable circumstances, from being presented to the public eye, is a subject of unfeigned and deep regret to me.

in England. They seem to form the fundamental axiom of English medicine, which less than any other forgets its practical purpose; which rejects every thing that partakes too much of theory, or that contains more theory than experience justifies and practice renders necessary. Hence the English are excellent cool observers of whatever is a subject for observation. But while they aim to draw only immediate and necessary conclusions, they reject that part of medicine which does not admit of these conclusions, and yet is deserving of further examination. They cultivate, as it were, only the tractable soil, from which they can derive an abundant harvest, neglecting wholly the more ungrateful and difficult tracts. The field, which they thus leave fallow, is that of speculation; but, as far as that of practice extends, there are no better observers, no better describers, and no better managers of disease than the English. As this, however, is not all, they must still be regarded as defective in their medicine, while it is harder to find any fault with their surgery.

If it was remarked of French medicine, that the therapeutic department falls behind the others, we must here say, that the cure is especially kept in view as the most important object, and that they are eager to reach it by the shortest route. The few theories, which the English have had, were the three of Scottish origin, of Cullen, Brown, and Darwin. Cullen's theory was properly, as a whole, rather a systematic order of diseases; the two others together, have never taken such deep root in England, as the Brunonian alone in Germany. Besides this, the great merit of English medicine consists in the application of facts to practice. Sydenham's practical experience, the inoculation of small-pox, the discovery and application of cow-pock, cinchona, calomel, colchicum, the use of citric acid for scurvy, and various other therapeutic experiments, establish their claims on this score. This direction of their energies grows naturally out of the national character of the English. The philosophy of their own Locke exhibits every where a sound logic. Bacon urged the acquisition of knowledge by experience, and Jeremy Bentham is recently extolling the principle of utility. Even now, we can remark in English medicine no dominant theory. The English are careful to distinguish accurately what they can expect to find by their researches. This cannot be better expressed, than as Abercrombie terms it, when he advises to seek "the generality of a fact." They collect cases, and thence deduce conclusions. Their literature places diseases in view in distinct treatises, and these monographs, which are compiled from single authenticated cases, form together a whole, resembling a gallery of excellent paintings. The descriptions of disease by English writers are true to nature, clear and unembarrassed; their short reflections are striking and appropriate, and they go directly to the point. Their value will readily be appreciated by any one, who has had occasion to study a scientific subject in foreign authors. The practical physician finds in them trustworthy, and, what cannot be said of our

German literature, which is rendered uncertain by differences and dark by illustration, truly refreshing studies and guides. These are traits which the author confesses so captivated him, that he should have been tempted to inordinate commendation, had not the judgment of older observers, and a second reading of the remarks of Steiglitz, which terminate the second volume of his pathological researches, "on the peculiarities of English medicine at the present day, and its influence on nervous fever," brought back to his recollection the worth and the necessity of prudent speculation.

The pathology of the English rests in part on physiology and anatomy with the associate sciences, but principally upon therapeutics, which form not only its aim and object, but literally its basis. English medicine does not reason both forwards and backwards; it forms conclusions *ex juvantibus et nocentibus*; it is a science which is resolved to become wise by experience. Pathology in its whole range is not well treated by them, but for the management of particular diseases and symptoms, the English have rendered great service to medicine. Hence, while their general therapeutics are confessedly open to criticism, their special therapeutics are in many instances excellent.

In lecturing, the teachers adopt as the basis of their arrangement the nosology of Cullen, or that which is given in the *Study of Medicine*, a very clearly written and much esteemed work of Mason Good, or that contained in Gregory's *Conspectus Medicinæ*. But as there are no leading speculative views, and as the doctrines of single schools are not made public, it is not possible in describing English medicine, as may be done in regard to that of other countries, to observe it from general points of view. Cases, monographs, and individual views, must all be separate and distinct. The conclusions and deductions which are made are so short, that they seem like threads not long enough to be woven together to form a texture. In reviewing English medicine, there is no pathological doctrine to illustrate, as in France, but certainly more therapeutical means to mention. Accordingly, in place of theories or methods, we have to remark in this connection on three leading therapeutical means, mercury, purging, and blood-letting; and these may be considered a little more at length.

It is not easy in English medicine, to find out the precise virtues of remedies, their *modus operandi*, or the grounds on which they are selected. Frequently the principal reason given seems to be, that the remedy has done good in other cases, and therefore it may be expected to do good in this.

Mercury is given either in large or small doses, and its use is to be distinguished accordingly. In large doses, the only preparation employed is calomel, in small doses the protoxide in the form of blue pills. Of the use of large doses of calomel, I find a full discussion by Robert Graves, in the *Dublin Physical and Chemical Journal*, No. xvi. Dr. Graves is a physician of the new English school, of high character as a lecturer, practitioner, and critic.

He recommends the medicine, whatever may be the seat of inflammation. According to him, blood-letting takes the first rank, and calomel the second, in the treatment of inflammation. He gives it in the dose of a scruple, twice in the twenty-four hours, or according to the urgency of the symptoms. The object is to mercurialise the system, so as to effect a change in the capillary circulation and the secretions. This treatment demands certain precautions. The patient must take no cold drink, but every article warm; oatmeal gruel without lemon juice is the ptisan which Dr. Graves recommends, and of which the patient must take but three pints daily, because excessive drinking overloads the stomach, and produces mercurial diarrhœa. In most cases, he regards the use of mercury in small doses as injurious, and rejects as dangerous the treatment with blue pills. According to his observations, salivation, in place of augmenting the fever, has the contrary effect. He can assert, he says, that if the fever is occasioned by inflammation, as by pericarditis, pleurisy, &c., calomel will, nine times in ten, at the commencement of salivation, produce a marked diminution of the inflammation and retard the pulse. He has never seen any evil consequence follow upon calomel, in those cases where its use has caused a sudden and complete disappearance of severe inflammation. The same remedy cannot be at once useful and injurious to the constitution of a patient. If the mercury relieves the inflammation, it causes no detriment to the animal economy.

The confidence in large doses of calomel in inflammations and congestions is great and extensive. There are few individuals who have not at least once been thus treated, yet few voices are raised against the remedy. Its use threatens to be somewhat curtailed by the late non-mercurial treatment of syphilis, which, since its adoption by Carmichael, finds many adherents. I find, however, upon enquiry, that this new practice is not followed in the large London hospitals, neither in St. Bartholomew's, nor St. Thomas's, nor Guy's, nor the Lock hospital, nor yet in Stephen's at Dublin. In all these calomel and opium are administered.

Some explanation of the principles of the mercurial treatment is given by Wilson Philip, "On the Influence of minute doses of Mercury." London: 1834. His immediate purpose is to recommend the use of small doses, but the work also contains a physiological view, and a rational account of its *modus operandi* in general.

According to this author, the operation of mercury is twofold, local and general. The general operation on the whole system takes place partly by means of the nerves of the part to which it is applied, partly through absorption and circulation. By absorption, it exerts the greatest influence on distant parts, because it comes in immediate contact with the various organs, and acts directly upon them, more or less as a stimulant, exalting their functions. To the alimentary canal and the salivary glands, it is also evidently a stimulus, even when applied to the skin, and this

irritation may pass into inflammation, if not immediately relieved by increased secretion. Thus, mercury, along with its stimulant, exerts also a demulcent operation. But by this power which mercury possesses of promoting various secretions, we can effect only a transient and imperfect relief, for a check of the secretions is but a secondary effect of the disease. It must, therefore, have another effect, and this is exerted upon the liver. On this organ, the remedy not only has a specific power to exalt its functions, but also to correct various functional abnormalities, and to affect the structure of the organ itself, in a degree in which it can act on no other organ, and in which no other remedy can act upon this. Now the sympathy between the stomach, liver, and duodenum, is so great, that whatever benefits or injures the one, must affect the others in like manner. Again, whatever affects the digestive system, must have an influence on the disease, for scarce a deviation from health occurs in which these parts are not concerned. Farther, one of the great causes of the influence of the digestive system, is its sympathy with the brain. This directly influences the action of the heart and its vessels to their smallest ramifications. The discerning and assimilating processes are entirely dependent on it, and on the spinal marrow. If such are the conclusions we obtain respecting the use of the liver *à priori*, they are abundantly confirmed by observation. In the most important diseases, local and general, the function of the liver is more or less disturbed, and on the condition of this organ the treatment indicated more or less depends. Hence it happens that in warm climates, where the sympathies are so active, affections of this viscus are a leading circumstance in acute and chronic disease. Dr. Philip has, consequently, for many years adopted the custom of examining the region of the stomach and liver, in every case, as carefully as the pulse.

The operation of small doses frequently repeated is, according to Wilson Philip, of great practical importance. According to his experience, the quantity of quicksilver usually given, however useful the article may be occasionally in large doses, is, on the whole, at least ten times greater than is necessary to develop its beneficent operation. Its favourable influence upon the liver has enabled physicians to give it in too large quantities. He explains the innocence of twenty and thirty grain doses of calomel, by the rapidity with which they are conveyed out of the system. Of the united stimulant and reducing powers of mercury, the former preponderates in small doses, the latter in large. He now obtains decisive benefit from a single dose of mercury, as from a half to one eighth grain of blue pill. This is the protoxide, obtained by rubbing down the regulus of the metal with chalk. The methods of preparation are various, but the London process is the best. The hydrarg. oxyd. cinereum, which is so produced, contains of quicksilver 96.16 parts, of oxygen 3.84. Eight grains of blue pill contain three grains of the protoxide, of which the usual dose is one to three grains. But the full benefit of the medicine is said to be

realised in the small dose above mentioned. The cause of its powerful action, is the absence of aperient effects. It is fully absorbed into the general system, and, as it causes but slight irritation, is not eliminated therefrom. It is by maintaining this constant general influence, that it is made to work upon the gums and produce salivation, while large doses often fail. It must be remarked also, that one half grain of blue pill is estimated equal to one twentieth or one thirtieth grain of calomel, for one grain of calomel is equivalent in aperient and alterative power to ten grains of blue pill. Thus far Wilson Philip.

Salivation is, therefore, desired and kept in view by English practitioners, while we, except where peculiar views are adopted of the treatment of syphilis, always regard it as an evil. The East Indian physicians, however, are the greatest advocates for the mercurial practice; indeed, this Indian origin of the practice might be almost surmised, from the importance which is there attached to the liver. But the great authority for the use of the protoxide is Abernethy, who is especially celebrated for his attention to internal treatment in surgical cases. Abernethy exercised a very great influence on the surgery, and almost as much on the medicine, of his time. His great maxim was, subdue local irritation, and regulate the action of the digestive system, and you control all controllable diseases. It was well known that he was particularly successful in the treatment of chronic disease. His means for the purpose were to a great extent these same blue pills. Their reputation is that they do not disturb the stomach and bowels, that they operate gently, and "bring all in order again."

In Germany, we do not use this famous protoxide. The gray mercurial ointment is much recommended: but Plenck's merc. gummosus has vanished from the pharmacopeias.

In close connection with the use of mercury is

The purging method.—When the English especially wish to mercurialise, they add opium to the quicksilver, but frequently the object is to move the bowels also, and then they leave out the opium. At the same time with Abernethy, a system of practice was adopted by James Hamilton, a physician and professor at Edinburgh, whose book on the use of purgatives, gained him many adherents. Among the extensive agencies which the English ascribe to mercurial remedies, it was natural that they should adopt them as derivative means; and in fact both calomel and blue pill are employed in this view. Sometimes, however, they employ other aperients, either in combination with these, or alone. They add salts, for example, in order to act on the intestines and kidneys, as well as the liver, and for this purpose often give calomel in the morning, and salts in the evening. The other aperient means are the epsom salt, with an addition of sulphuric acid, colocinth, castor oil, croton oil, rhubarb, and senna. To keep the bowels open is a leading maxim, and it is to be remarked, that in no country are the conveniences for this purpose so great, as they are found in a neat English water closet. English and

French medicine have, therefore, this in common, that both recognise the great importance of the digestive apparatus; with the distinction, however, that the latter takes rather a pathological, the other a therapeutical view of it; one regards it as the seat of the disease, the other as a medium, through which to act curatively upon it.

We farther remark how important an object it is to the English to promote the secretions, those of the intestinal mucous membrane, of the kidneys, skin, mucous glands, and liver.

Blood-letting.—As the great authority for recommending copious bleeding we may mention Armstrong, and we are assured that nearly three fourths of the English practitioners follow him. They hold the human system to be so constituted that it can bear a considerable loss of blood. They advise in attacking inflammation to withdraw the blood as rapidly as possible, and for that purpose to make a large opening in the vein. If the blood flows slowly, the vessels have time to place themselves again in relation to the diminished volume of this fluid, and therefore the intended “shock” to the whole system does not follow. In order to be sure of this, blood is drawn to commencing deliquium, and as this takes place sooner in the upright than in the recumbent posture, this circumstance is always taken into the account. Even in chronic inflammation, bleeding is much depended on.

Caleb Hillier Parry, in his *Elements of Pathology*, published in 1815, recommended blood-letting for almost all affections. This writer, however, has not obtained a great reputation in England. In consequence of the independence of the English of any leading pathological view, and of general pathology, many individual plans of practice arise which do not become general, some of which are extremely singular, and should rather be reckoned as curiosities. It is superfluous to say more on the subject of blood-letting. The latest writers on the subject, Marshall Hall and J. Wardrop, have been mentioned above, and the latter is still an enthusiastic partisan of the practice.

Mention must still be made of some peculiar circumstances in English medicine. Together with the above-named and especially debilitating remedies, other therapeutic means, intended to promote the restoration of the strength, seem to exist in undue proportion. The application of cinchona, of port wine and opium, which was so common forty years since, and to which C. Fisher alludes in his *Med. Chir. Remarks on London*, 1796, has indeed ceased to be carried to so great an extent. On the other hand, the invigorating treatment of the English practitioners now consists in giving nourishment, which both in quantity and quality surpasses that allowed to a patient in France. For light diet the patient receives in the hospitals a quarter of a pound of meat, a half pound of bread, and a half pound of potatoes; for fever diet, tea morning and evening, and at noon a half pound of bread, or an allowance of sago. Sometimes beef-tea is also permitted, which is a weak broth prepared from the infusion of beef cut in small pieces; chicken-tea is a still weaker

preparation. The medical means for restoring the strength in "typhus mitior" or "gravior," are more limited than in Germany. The English have in fact many authorities for bleeding in these affections, especially Armstrong. But when the object with them is to support the system, they give more stimulating, or, as they call it, antispasmodic articles, than our nervines. Although they do not reject valerian, arnica, and serpentaria, they prefer giving wine, quinine in place of cinchona, musk, ammonia, the ethers, opium, and, what is original with them, arsenic as a tonic. Camphor can hardly be reckoned among their stimuli, for camphor mixture is often chosen as a vehicle for other medicines. They make little use of the laxative extracts and neutral salts. Among the remedies peculiar to them may be mentioned the famous James's powder, which still maintains its place as an unexplained preparation of antimony, carbonate of iron, oil of turpentine, chlorine, cold applications. Great influence is also ascribed, and with reason, to traveling; and change of air is a prominent remedy of the English physicians. Some new medicines have been particularly tried by Elliotson, formerly at St. Thomas's, now at the University Hospital. He has used creosote in phthisis and epilepsy without effect, but he regards it as decidedly soothing in rheumatic neuralgia not of inflammatory character, in hysteria, and palpitation. It removes nausea, and prepares the way for other remedies in enteritis and colic: in diabetes it promises something, and has acquired reputation for external application to relaxed ulcers. Iodine has been praised in affections of the glands, and in secondary syphilis with mercurial symptoms, or in a state in which it is difficult to discriminate between the two affections, it is evidently and peculiarly beneficial. Within a few years the water-proof caoutchouc has been employed to form what are termed water-beds. The water is in place of a bedstead. On it lies the caoutchouc stretched and floating, while the patient is on a matress, prevented from galling by the ease with which he turns and by the coolness. In the London Hospital from seven to eight such beds have been in use for four years; they cost six to eight pounds each.

Not a little attention has been attracted to Stevens's researches on the blood, his suggestion that the red colour of arterial blood is not due to oxydation in the lungs, but to its containing salts, and his consequent treatment of cholera and other diseases by saline injections into the veins. His book has not thus far found much favour, though he is not wholly without converts. Besides him, Marsden has found this method effectual in restoring the circulation. The liquid injection is composed of muriat. sodæ 3 iij., carbon. sodæ 3 iij.ss., oxymur. potass. gr. xv., aquæ lb. iv. In children under fourteen, 32 oz., in adults 48 to 80 ounces are sufficient to restore the circulation.

I must once more notice the present direction of enquiry to the physiology of the nerves. Its application to pathology may be found in small memoirs of Sanders, Griffin, Teale, and John Marshall; in the larger and more important work of Travers "On

Constitutional Irritation," vol. ii., 1835; in H. Mayo's "Outlines of Pathology," 1835; and Marshall Hall "On the Nervous System," 1836.

Foreign medicine and the views entertained abroad are becoming better known in England. French practice is most esteemed, and much of it has been adopted. The journals contain fuller accounts of French literature, and it is common for physicians and surgeons to pass a certain time in Paris. Auscultation and percussion are becoming widely known, and form the subject of some original works by Stokes, Forbes, Williams, Hope, and Davies. Even the doctrines of Broussais are, not indeed wholly admitted, but yet, as by Stokes for example, more directly approved than elsewhere out of France, and their correct views at least are constantly extending.

German medicine is much less known. The difficulty of the language is complained of: those who have learned it in Germany easily forget it again: and even the classic works written in Latin are not regarded. This ignorance is now about to cease. Robert Graves in Dublin is known as being versed in, and a judge of, the medical literature of Germany. The latest proof, however, of the interest taken in it, is furnished by the appearance in 1836 of the British and Foreign Medical Review, or Quarterly Journal of Practical Medicine and Surgery, published by J. Forbes and Conolly.

Medical pathological anatomy has been seasonably and attentively studied. Baillie, who was closely connected with John Hunter, laid the foundation; and Farre followed him. That it has not since been neglected is proved by the museums, and by its recent cultivators, Abercrombie, Bright, Hodgkin, Carswell, and Kiernan.

It seems proper here to take some notice of the climate and diet in England, especially as connected with the large doses in which the practitioners there give medicine. The luxurious vegetation and mild climate of England are well known, and might be suspected from the dark evergreen of her fields and shrubs, and from the success even of tropical plants in the open air. Another circumstance is the fogginess of the island, surrounded as it is by sea air and immersed in dampness from the same cause. These circumstances exert a very beneficial influence on the physical condition of the animal economy. Both animals and men appear well nourished. The sea air and labour sharpen their appetite, which is satiated on the strongest animal and vegetable food, so hearty and condensed that a continental European of the best appetite finds it immediately extinguished by their soups, their dishes of meat, and their malt liquor. An English constitution is, consequently, in its vegetative character, peculiarly massive, the digestive apparatus is, in regard to chylopoiesis, to assimilation, and to all its processes, in a superior condition; it can bear, and it requires, a decidedly active medical treatment. The frequent dyspeptic affections and complications make gastric inanagement and depletion especially needful. Soda and seltzer water are favourite digestives, and the

above-named means are the remedies indicated. The large doses which appear so remarkable are thus accounted for, and extend themselves, as we shall see, fully to the gastric remedies. Epsom salt, for example, which is directed in our pharmacopeia in doses of a dram, is given in London practice to the extent of three or four. These influences of climate and diet appear still more evidently in other facts. Thus an Englishman on the continent experiences an excessive operation from his dose of neutral salt, but on his return home is compelled to return to the customary quantity, in order to obtain the usual operation; and a German resident in England requires perhaps a double dose of the laxative carried with him. During my stay in England, I made no trial of the kind on my own person. I regret that I had not then thought of instituting some experiments which could have been carried on without any inconvenience.¹ The same is true, however, of other remedies, and among the rest I have been able to observe this remarkable influence of climate and diet in the use of opium. Wine, too, is borne in much larger quantities, before it evinces its stimulating property.

It is these atmospheric and endemic circumstances which make England the land of gout, of gravel, of aneurism, consumption, rheumatism. If gout is rather found among the richer classes, rheumatism is far more frequent with the poorer. Labourers commonly carry a piece of sulphur in the pocket as a preservative against this disease.

RHEUMATISM OF THE HEART.

A disease of which you hear much said at present in England, is rheumatism of the heart. One may easily infer the frequency and the severity of rheumatism in this country, when he learns that the result has been here clearly attained that half of those affected with acute articular rheumatism have affection of the heart. Such cases occur particularly in the hospitals, because the class of patients there found are particularly exposed to dampness and to changes of temperature. The cardiac symptoms, however, are of a kind that easily escape observation, partly from the severity of the rheumatic pains in other parts, and partly because they are little regarded by the patient himself. The means of recognising the affection are furnished by auscultation and percussion, sometimes by these alone. It was in England that the connection between rheumatic fever and organic disease of the heart was first remarked by Pitcairn. The observation was confirmed by Dundas, Wells, and Odier in Geneva. Lately it has been noticed by Latham, Elliotson, Hope,

¹ During my last year's stay in England I have made at least one experiment of this kind. I prepared a dose of epsom salt and senna, (sal. amar. 3j. inf. sen. c. 3j. aq. font. 3iv.,) and took one third part twice in the evening. It had some effect on the consistence, but none upon the frequency of the stools. I have since repeated the same quantity in Hanover, and always obtained a decided operation.

Davies, Abercrombie, Stokes, and Watson, and lastly in France by Bouillaud.

The nature of the cardiac affection consists in the series of organic changes, of which inflammation is assigned as the cause. The parts of the heart which, on dissection, exhibit traces of inflammatory action, are the membranous parts, as the pericardium after pericarditis, the external and internal surfaces of the organ after endocarditis, the lining of the ventricles, auricles and valves, and likewise the muscular substance which Bouillaud divides into two, the inner stratum which promotes the movement of the valves, and the outer which effects the contraction. If the external casing of the heart suffers, there follows effusion of serum, deposition, adhesion; the membrane is thickened, or becomes rough and shaggy on its internal surface. In endocarditis the inflammation is mostly limited to the valves, which become thickened and less transparent, especially the fibro-cartilaginous parts of the valvulæ mitralis and semilunaris, and most frequently exhibit wartlike excrescences, very similar to syphilitic condylomata. Hypertrophy is one consequence of the affection of the muscular substance; other consequences are mechanical, as distention. Such are the appearances discovered after death, which of course vary in degree, according as the fatal result follows sooner or later.

Rheumatism of the heart is called a very fatal disease, more on account of its eventual consequences, than on account of its immediate effects, or even the chronic and gradually developed organic changes. In most chronic diseases of the heart there is evidence furnished that the patients have first suffered from severe rheumatic fever. It is on this account that the importance of early discovering the extension of the disease to this organ is so highly estimated. Hence in acute rheumatism the chest must be daily examined, especially by auscultation and percussion, because this affection betrays itself to the ear rather than to any of the other senses. Some suspicion of its approach may be suggested by a strangeness in the manner of the patient, a wild, even sorrowful expression, without verbal complaint, a dirty gray complexion, and a tendency to delirium. On percussion, there is detected an unusually flat echo, and with the ear a peculiar morbid sound; the usual heartbeat is no longer clear, but mixed with a *to and fro* tone, an intermittent screaming as of a saw. This sound remains for some days after recovery from fever, then gradually ceases, or remains constantly, in case an organic heart disease is forming. It is ascribed to the rubbing of the dry and rough membrane of the pericardium. There is also a tone which indicates affection of the inner lining of the cavities, which is deeper, and dependent on the change of the usual relation between the ventricles and the openings of the vessels and auricles.

After this, other general sympathetic affections usually supervene, as palpitation, accelerated small or intermittent pulse, stricture in the epigastrium, short breath, anxiety, dry cough, pain in the cardiac region, increased by pressure with the fingers on the

interstices of the ribs, by deep inspiration, and by lying on the left side, stiffness and pain in the region of the left shoulder, and often under the left arm, breaking off shortly at the elbow or wrist. These signs are seldom all united; were they so, the diagnosis would be easy; hence auscultation, as its indications are constant, affords the surest signs and perhaps the easiest to recognise. Generally both morbid sounds are present, forming a double symptom; but the pericardiac sound is more frequently wanting than the other; pericarditis is more rare in articular rheumatism than endocarditis. It is also to be remarked, that in acute articular rheumatism, when heart affections occur, symptoms not unfrequently supervene which point to cerebral disease. In rheumatic carditis there sometimes occurs delirium or mania, or comatose phenomena or convulsion; so that inflammation of the brain is easily inferred, especially as metastasis is always regarded as a leading characteristic of rheumatism. Dissection, however, discovers no change in the cavity of the cranium, and by directing the treatment against phrenitis, the inflammation of the heart may be wholly overlooked. This happens not only among adults, but even in children. The treatment recommended may easily be imagined;—venesection, leeches to the præcordia, cathartics, mercury with opium pushed to salivation, colchicum.

In France, especially by Bouillaud, digitalis is recommended, particularly its endermic application, in the chronic form, or when the sound above referred to continues. It seems proper here to quote the views of the French on this subject; for it will be found, that rheumatism is only recently discovered to be the cause of heart affections, though the latter have been so especially studied by Corvisart, Bayle, Laennec, Bertin, Louis, Bouillaud, Andral, and Rostan. Laennec and Bayle were of the opinion, that pericarditis was very difficult to detect during life, and they acknowledge that while they have several times suspected it, they were not able to establish the diagnosis. Louis (*de la pericardite*) subjected it to especial investigation, and perfected the diagnosis by paying particular attention to the flat sound on percussion, and to the projection of the præcordial region, and uniting these symptoms to the commonly received one of pain, which is wanting in half the cases, of irregular, rapid, intermitting pulse, palpitation, dyspnoea, fainting, and œdema of the extremities. As respects the frequency of the disease, he has, according to his statistic or numerical method, examined the dissections recorded by Morgagni, and among them numbered 1263 cases, in which the condition of the heart was examined by dissection, and has among these found 70 adhesions of the pericardium, proving that at some previous time this membrane must have been inflamed. In the post mortem examinations made by himself, which are 443 in number, he has found the signs of disease of pericardium 18 times, or in one of 24 cases. I shall not follow farther his calculations, which, however, extend to the course, anatomical appearances, prognosis, consequences, and even causes. In regard to the causes, it should

be remembered, that he does not reckon rheumatism among them. This cause he did not happen to discover. From this an argument might be drawn that rheumatism, in France, is not so frequent, or so severe, or does not attack the heart; or the same facts might authorise the inference, that the numerical method affords no assurance that every fact is observed. When Louis wrote in 1826, attention had not been directed, in France, to this particular cause. Bouillaud, whose last great work on diseases of the heart appeared in 1835, has especial regard to rheumatism, and still more in a monograph, written in 1836, entitled "*Nouvelles recherches sur la Rhumatisme Articulaire aigu en générale, et spécialement sur la loi de coincidence de la péricardite et de l'entrecardite.*" He asserts that it is three years since he accidentally discovered the coincidence of carditis with acute articular inflammation. At all events, the English discovered it earlier. He makes especial reference to the signs derived from auscultation and percussion. He also found that in half the cases of rheumatic fever, the sero-fibrous texture of the heart, the pericardium, or the endocardium, was also affected during life. His treatment, as might be expected from a zealous Broussaisian, is strongly antiphlogistic. He lets blood to the amount of two to eight pounds; and applies leeches or cupping locally. His auxiliary means are blisters, fomentations to the joints, baths, opium, digitalis endermically applied, and strict diet. With this treatment, he reckons the average duration of rheumatism at one to two weeks, in place of six to seven. In regard to mortality, not a single case proved fatal out of 80 patients, treated in this manner, during four years, in his ward at La Charité. He explains both the rarity and the fatality of heart disease, as mentioned by the earlier writers, by supposing that the disease was never recognised, except in cases where it proved fatal.

HAY FEVER.

There is in England a national disease known by this title, a catarrh to which certain persons are regularly subjected in the months of May, June, and July, and which they ascribe to the effluvium of the hay. It is only lately that it has been regarded as an object of scientific attention. Dr. Bostock, in the *Medico-Chirurgical Transactions*, vol. xv., describes it under the title of *Catarrhus Æstivus*: he studied it for himself, and afterward taught it to others. He ascribes it to excessive heat. It is a catarrh with sneezing, headache, weeping, snuffling, and cough. Sometimes there is fever and general discomfort. It does not affect the poorer classes, but only the rich. Bostock finds that no remedy can be depended on, but that it vanishes spontaneously. He has tried with equal ill success, iron, opium, mercury, blisters, leeches, the mineral waters of Leamington and Harrowgate, Bath water, and sea bathing, privation of wine and meat, and an improved diet. He now limits himself to small blisters, mild purgatives, ipeca-

cuanha, Dover's powder, squills, digitalis, and cold. A cool residence near the sea is the best remedy. I have seen a case of this summer catarrh. It is singular, that it should attack the same persons for several years in succession about the same season.

WATERING PLACES.

On the whole, medicated springs and baths are not considered of so much importance in England as in Germany. They are both fewer and weaker; the bath-literature of the English is meagre. They have chalybeate water, saline water, sulphuretted water, and a few mineral springs in Scotland. The baths of foreign countries are more esteemed than their own, on several accounts. First it is the fashion, then they are more active, then cheaper, and lastly they involve a journey to the continent, which is held advantageous for many reasons. The old, celebrated, and beautiful Bath, is almost deserted. Cheltenham is most frequented in autumn, and Brighton in winter. These are the directions taken by the world of fashion, when the London season is over, and these are followed implicitly in their movements by the whole body of society in England.

Cheltenham lies forty-three English miles from Bristol, forty miles from Oxford, and nine miles from Gloucester, contains 26,000 inhabitants, and has grown up so quickly, that its population has increased eightfold in thirty years. The visit made to the baths by George III., especially brought it into notice. The saline fountains were discovered in 1716, by watching the motions of the doves, which show that there was some water which remained unfrozen in winter. By degrees all the medicated waters indigenous to England were found here united. Private persons erected accommodations for drinking and bathing, planted alleys and gardens, and the new houses which were built formed at last a beautiful town in a beautiful region. There are now five bathing establishments. They are termed in a general manner, Spa, a name applied by the English to all mineral fountains. The oldest is Old Wells, on the spot pointed out by the doves. The best springs are in Montpelier-Spa, in which name are united two of the most celebrated medical places. This establishment was founded in 1806, by Mr. H. Thompson, who was so fortunate as to find on his ground successively, eighty mineral springs, which he brought together by pipes. The Montpelier-Spa are of six different kinds, and are termed—1. Chalybeate saline—2. Strong sulphur saline—3. Weak sulphur saline—4. Simple saline—5. *a.* Iodine saline—*b.* Iron magnesian saline—6. Saline muriate of soda. All the Cheltenham springs contain salt, except the pure chalybeates. The strong chalybeate spring is the saline and chalybeate Spa in Cambray. The remaining two establishments are called imperial Spa and Pittville, which last is the most recent discovery. The latest chemical analyses were made in 1832, by Cooper, and apply particularly to Montpelier-Spa. The results of this enquiry

may be found in Scudamore, "On the composition and medical properties of the mineral waters of England," 1833.

As abundance of water of the richest quality is present, it has been undertaken to crystallise the salt : this is done in a very large laboratory. The salt is allowed to settle in small wooden troughs, (if prepared for a hot climate, it is also permitted to effloresce,) then packed in glass, and offered under the name of real Cheltenham salts. They are sent over all England, and many visitors of the baths carry them away to complete their cure.

The waters are partly drunk, and in part used as baths. For the privilege of drinking during the season, one person pays £1 1s., a family £2 2s. The use of the walks and rides costs besides to each person 7s.

Among the baths the Montpellier are the best. In this establishment are twenty-five baths, fourteen warm. The warming is artificial, and is effected very quickly by connecting them with the laboratory above mentioned. A stream of water is conducted under this and comes in contact with a column of hot air, which raises the temperature of the water immediately to 180° Fahr. In this state it flows into a large receiver, from which it is drawn for use, while in the larger baths it is constantly in motion, always ebbing and flowing. The cold baths have a mean temperature of 56°; the largest cold bath measures twenty feet in length and ten feet in breadth. There are also shower baths, shampooing baths so called, douches, hot air and vapour baths. A common bath costs 1s. 6d., a warm saline bath 3s., a sulphur bath the same, and so on. The baths are open from 6 A. M. to 10 P. M.

There are in Cheltenham nineteen physicians, properly doctors of medicine, which is a large number for the population, and twenty-three surgeons, who also practise medicine; (vide chap. x. on English medicine, and its reform.)

Bathing life in Cheltenham has all the family and individual comfort which is usually seen in England. The principal or high street leads through the whole town, by-streets pass right and left, and conduct through alleys to the bathing establishments. The houses are mostly new, and look homelike and comfortable, as English houses always do. The shops and inns are showy. In the morning from 7 to 9 A. M., strangers go to the springs, especially now to Montpellier-Spa. In the great rotunda, they call up and down for numbers one to six, and meanwhile traverse the walks, ladies and gentlemen in morning dress, while a band of music is playing. They then go home to breakfast, for no one breakfasts in public. Numerous equipages, horses, and asses are seen; you also find them to let in the streets, where small chaises with one horse, called flies, are in use, and where little low wagons with three wheels, drawn or pushed by men, are hired by the sick. For the men there are journals, libraries, billiards, races, and hunting. The ladies walk with book in hand, or appear on horse-back. By five or six o'clock every one is at home. In the evening, there are musical promenades. A military band, of about

seventeen pieces, plays in the Montpellier garden, from seven to nine. Meanwhile the company are walking up and down on the turf, in parties without any intermixture. This walking in large parties by good music, playing pieces from Handel, Mozart, Rossini, and Irish melodies, always concluding with "God save the king," affords a quiet simple pleasure. Once in the week, there is a ball in the rotunda, which commences about eight o'clock, and where ladies appear in walking dress, and dance in hats. In the assembly rooms is a very handsome parlour, where card parties assemble daily; and balls are given on extraordinary occasions, and concerts occasionally. The theatre is open several times a week.

A master of ceremonies is employed, to promote sociability, and expressly to conduct the balls. The present has now kept his post for fifteen years. He gives yearly two subscription balls for his own benefit. Every guest, on his arrival, inscribes his name in the books of the master of ceremonies, on which the latter waits upon him personally.

Leamington lies near Warwick, is two hours' journey from Birmingham, and ten from London. The small town is nearly new, regularly and conveniently built; the establishments for drinking and bathing are like those in Cheltenham, but on a smaller scale; the country is equally hilly, and perhaps more beautiful. In the neighbourhood are the ruins of Kenilworth castle, so celebrated in Walter Scott's romance, and the wonderful castle of Warwick, well known by Prince Puckler's excellent description. Leamington has also saline, chalybeate, and sulphureous waters. The saline springs are found wholesome in dyspepsia, hemorrhoids, chronic gout, rheumatism, scrofula, swelling of the cervical and mesenteric glands, chronic ophthalmia, old ulcers, and cutaneous eruptions; on the other hand they are useless in stone, white swelling, and rickets. The sulphur springs are frequently used in combination with the saline waters, drank also by dyspeptics, those suffering with disease of the spleen and liver, and especially by persons who have lived in hot climates. The baths are also used in long convalescence from measles and small-pox, after the use of mercury, and in hypochondriasis. The chalybeate waters are frequently mixed with the others. They are recommended in chlorosis, cachexies, dysmenorrhœa, and weakness; they act injuriously in scirrhus, pulmonary disease, plethora; and likewise in constitutions inclined to apoplexy, hæmoptysis, all kinds of asthma, cough, and consumption.

Brighton.—The sea, which the English so well know how to prize and to use, plays an important part in their therapeutics. Among the numerous resorts for sea-bathing, the Isle of Wight and Brighton hold a distinguished place. Brighton is only fifty-four miles from London. Whoever wishes to withdraw suddenly from the cachexia Londinensis—that is, from the disgust produced by a large town and its narrowing occupations—flies to Brighton. With its dry air and dry soil, lying near the crowded canal, this town has

a most fortunate position for a sea-bath. The air of the neighbourhood is certainly not so bracing as on the Isle of Wight. The town has about 40,000 inhabitants, and extends itself about an hour's ride along the shore. During the season, the number of residents is almost 80,000. The royal family have for several years chosen this as their winter residence. Here George IV. built a pavilion, a large enclosure with a single pillar, whose cupolas and minaret-like summits make a striking appearance. The town increased in consequence more rapidly, now contains beautiful squares and crescents, and between it and the shore leads a long broad quay. The shore is covered with gravel for about forty paces in breadth; then comes fine clean sand, and a very gradual descent. Fourteen years since, a chain pier was erected directly out into the sea, 1134 feet long; it is at once an iron walk, a balcony, and a landing-place. Parties walk here by the sound of music, and enjoy a view of the whole extent of the town, and of the ever-changing sea with its innumerable ships, which are passing through the canal.

The time for bathing is from early morning till noon, and the bath is taken either in the open sea or in bathing-houses. All the arrangements are conducted by private proprietors, and no particular bath physicians are employed. For bathing in the open sea, two-wheeled cars are drawn by a horse to the proper depth, which is reached very gradually. Each car contains a towel and a glass. The price for the use of them is sixpence. Ladies go into the water in a separate place, and, as they generally do in bathing, wear large woollen bath dresses; they are always accompanied by a female attendant. The bathing-houses, however, are much more used. Of these there are a great number, containing warm and cold baths, both large and small; shampooing baths, in which rubbing and kneading of the skin are performed; shower-baths, and even steam-baths. Subsequent exercise is held to be very serviceable. Numerous parties are seen, about noon, elegantly mounted. In general, even at Brighton, bathing in the sea is but little resorted to; the warm sea-baths are principally employed, and the sea air is accounted very beneficial.

The mode of life is, for the people of quality, a mere continuation of the amusements of Cheltenham or of London. Theatres, concerts, balls, and libraries, are always accessible. Steam-vessels are constantly in readiness for Dieppe, which lies opposite, and for the Isle of Wight. Brighton has no harbour, but the chain pier already mentioned supplies the place of one. Besides sea-bathing, there is found here a mineral spring, a chalybeate water, and recently an establishment for artificial springs has been set up by Dr. Struve, called German Spa, which promises to be successful.

EMPIRICISM.

From the nature of things, quacks find in Paris and London circumstances very favourable to success. The famous philoso-

pher, Dr. Johnson, says that the reason why quacks succeed so well in England is, that nine tenths of the inhabitants are wholly ignorant on medical subjects. The reader will easily call to mind the most famous—as James Graham, who once erected a temple of health, and named himself president of the council of health, (*vid.* *Travels of Archenholz*); the Chevalier Taylor, “the pope’s, emperor’s, and king’s ophthalmic physician, author of sixty-five works in various languages, and of an art of pleasing, with the most interesting remarks on the power of prejudice;” Solomon, the celebrated discoverer of the balm of Gilead; and Brodum, whose cardiacs for a time were in great repute. There are now in London two charlatans, who are so distinguished as well to deserve mention. One is called St. John Long, the other Morrison. Long practises rather in the higher circles, and cures by a liquid which contains “murderous” irritants. Morrison has his zealous adherents among the lower classes, and his reputation is founded upon pills. Of these he recommends from twenty-five to one hundred to be taken at once. He calls them vegetable universal medicines. They consist of aloes, colocynth, and a strong addition of *extr. conij.* Analyses, however, have given different results, and it is suspected that they are frequently changed. It has been proved, by legal investigation, that many individuals have been sacrificed to their operation. Yet he goes on practising, and has lately, after conviction of manslaughter, only paid a fine of two hundred pounds, which in comparison with his profits was trifling. But, by making public these unhappy occurrences, the eyes of the people are opened to the character of such pretenders, as has already happened in the case of St. John Long. Morrison exhibits a pamphlet, containing a sketch of his own biography, and asserts that he studied in Germany, and particularly in Henault. After twenty-five years of bodily and mental suffering, he made his fortunate discovery when the whole faculty had failed in curing him. An engraving is prefixed, in which he appears in a fur cloak, whiskers, and a white hat. He calls himself Mr. Morrison, the Hygeist, president of the Society of Health. Among his fundamental principles are these—“Blood makes blood;” “Pain and disease spring from the same origin, and may therefore be regarded as synonymous expressions;” “Diseases arise from uncleanness in the blood, or, in other words, from sharp humours in the blood;” “The humours which injure the body have three sources—the inherited, the contagious, and the personal.”

NOTES.

The 17th June I saw the opening of a mummy, performed as a sort of dedication of the new school, founded by Brodie in Kinnerton street, near St. George’s. The collection was very numerous, crowded, in fact, as a rout, doors and stairs occupied, and the assembly included many persons of rank and of science. The well-known Egyptian traveller, Wilkinson, was present. The

outer box was already removed; the inner was made of sycamore, and covered with hieroglyphics, invocations to the Egyptian gods in behalf of the dead. The mummy was taken from Thebes, out of the temple of Ammon, and was a lady of rank. It was brought from Egypt by Sir Frederick Fitzclarence, sent to Mr. Keate, the surgeon, and by him presented for examination. The body was thickly and carefully enveloped in cloths, covered with a bright yellow bituminous mass; their separation could not be effected without the knife; a yellow dust or mould was scattered about in great quantity by the process, and smelt strongly of resin. At length appeared a dark brown, bronze-coloured form. For 4000 years debarred of her natural decay, she was now again compelled to an artificial resurrection. Every appearance of flesh had disappeared from the skeleton; the weight was some pounds. On the breast lay a beetle, a round green stone about an inch in circumference; papyrus was not found. Mr. Pettigrew, a surgeon, and a writer on this subject, delivered a lecture on mummies. The word mummy comes from the Egyptian word *mum*, which means wax. He spoke of the supposed healing power of mummies in the fifteenth century; how often, on this account, they were taken and counterfeited; how the money-making Jews gave to fresh bodies the appearance of mummies, in order to sell them by fragments; and how, as the fraud was discovered, the faith in them gradually diminished. He said he had boiled a piece of mummy three years previous, and that the odour given out was like that of flesh. Insects have been found in the resin of species no longer known.

Homœopathy in England.—On this, as on other subjects, the complaint may be made of the English that they know so little of their neighbours. In fact, until lately, they have paid little attention to the state of medicine abroad. Hence it is that homœopathy at present is taking them by surprise. They might long since have anticipated its approach, and have foreseen that they would as little remain exempt as other countries. It is to be hoped that their conceptions of German medicine will be so far enlightened, as to prevent their judging of its character by this doctrine.

It is three or four years since the first homœopathic physician appeared in London. Dr. Quin, a person of highly respectable character and education, translated some of Hahnemann's writings, and wrote himself in Latin a homœopathic pharmacopeia. Besides him, there are now three or four homœopathic practitioners, themselves Germans, the number of whom abundantly satisfies the demand of the public. Many Englishmen have made themselves acquainted with the doctrine during a residence in France, Germany and Italy. In Paris, especially, Dr. Trotman may be mentioned as an English homœopath. It has lately been extending its influence in England, and one clergyman and one lady have written in its favour. In London it has found adherents both among the aristocracy and the rich tradesmen of the city. The medical societies, at least the London Medical Society, has begun to pay it

some attention. Dr. Whiting, president of this association, has offered to a homœopath to give him an opportunity of trying the system on a certain number of his patients, which offer was declined by the latter, on the ground that he might perhaps be less successful among English than among German constitutions. Dr. Whiting declares that he has himself tried homœopathic treatment while suffering under indisposition, but without any marked advantage. I am not acquainted with any attack upon it from a scientific source. People are content to amuse themselves with comical anecdotes which we all know in abundance, but which are not particularly to the purpose. What will the English say when homœopathic cases are related to them? They will no doubt know how to judge of them excellently well.

Oxford.—When one sees Oxford with its two and twenty colleges, large, antique, quiet structures; where the gardens, with their evergreen shrubs, bushes, and banks, the broad courts strewed with yellow sand, the cells and walks wear the same Gothic character; when one sees all the circumstances inviting to retirement and study, the lofty rows of trees, the dark alleys on the water side, the libraries so well fitted for abstraction and forgetfulness, the painted windows of the chambers where the student may waste the midnight oil and watch the return of day, the costume of the middle ages, fitted to bring to the memory Bacon and Erasmus; one cannot but wish that other objects of science might here fill and employ the heads, which are content now in busy idleness, to pore over the classics of Greece and Rome.

Sea-sickness is caused by the rolling motion of a vessel, and produces the same sort of nausea which is caused by a swing. The whole body is disturbed, as well as the brain and the ganglia. The same sort of disturbance follows when one moves the head rapidly up and down. The proximate cause of sea-sickness is concussion of the brain. There are instances in which, in persons predisposed to the affection, apoplexy of the brain has been the consequence. Sea-sickness is much more frequent in steam vessels, because their lightness offers less resistance to the waves, because the engines produce constant agitation, and because the smoke and air of the burning coals are both calculated to produce nausea. On rivers the motion is too slight to produce any effect. Old sailors often feel sea-sickness again in steam vessels, though the motion of others has long ceased to produce any effect. It can hardly with propriety be termed a disease, for this proceeds, when once commenced, independently of its cause; but sea-sickness is a mere interruption of the usual healthy processes from an accidental circumstance, and these return as usual when this circumstance is removed.

Unprofessional persons have asserted, that after sickness of several days the colour of the skin changes and remains yellow for a considerable time. This assertion is by no means improbable in

itself, for we can easily conceive that after violent vomiting a re-absorption of the bile may produce temporary jaundice.

The proper remedies are those which relieve vertigo—free air, determined will, champagne wine, ham, rum, cardiacs, applications to the stomach, &c. In long voyages and rough weather, however, these are of no avail, and any attempt at resistance is vain and unwise. To repress the vomiting is in fact not to subdue the disease, but only to counteract the operation which is fitted to moderate its violence. It is most advisable to lie in bed, and by placing the head on the pillow, to secure to it a solid position. From time to time the nausea will become more urgent, disquiet and heat extend over the whole body, sweat break out, and vomiting follow. As a means of mitigating the last it is advisable to take a single swallow of water and a small bit of bread a short time before. After the vomiting follow quiet, fatigue, and sleep. After some hours, the same succession of symptoms is renewed, and continues perhaps a quarter of an hour. In this manner a man may pass several days, more or less, according to the length of the voyage and the kind of weather. If the wind lulls, or the vessel nears the shore, the sickness diminishes, and in the latter case even before the land can be seen. The pale faces collect upon deck, the appetite returns, and many experience no ill consequence from the severe vomiting, though some may have to suffer still some days.

CHAPTER V.

FRENCH SURGERY AND OPHTHALMOLOGY.

Wounds—Surgical anatomy—Chirurgico-pathological anatomy—Bandages—Operative practice and medical surgery—Discoveries—Strictures and stone—Lithotriety—Velpeau—Amussat—Ophthalmology and specific inflammation.

In the second chapter, it has been remarked in what relation the doctrine of inflammation seems to stand to French surgery, and how far the general character of the latter seems to spring from the former. Some peculiarities remain to be noticed.

The treatment of wounds demands a less favourable judgment in regard to the mode of effecting union. Cold water is very little employed in the way of fomentation. Boyer does not notice it in his surgery. Some recommendations of this practice have lately appeared, as by Bérard (*Arch. Gen. de Med.* 1835), and it is applied by Sanson, Breschet, and Velpeau. If sticking plasters are used, they are not so neatly spread as is done in England by machinery. But bandages and charpie can hardly be placed on more carefully than the French do it.

The especially surgical relations of anatomy have been less perfectly developed here than elsewhere. Surgical anatomy has few

monographs to exhibit, and in their surgical treatises are found fewer remarks of a practical character upon all the parts which have to be regarded in important operations. From this censure must be excepted the bones in their relations to fracture, the muscles in connection with luxation, and the anatomy of the urinary and genital apparatus, as far as the bladder, urethra, and uterus are concerned, the diseases of which form, at this moment, a favourite subject with French surgeons. Their surgical anatomy is evidently derived from recent subjects, or, as regards osteology, from dry preparations. The great facility of pursuing anatomy by dissection, important as it is, does not unite in itself all the advantages which the preservation, and likewise the fine and accurate exhibition of anatomical structures and conditions, possess. The immediate influence of this in their surgery is manifest in their chirurgico-pathological anatomy; hernias, fractures, luxations, aneurisms, accidental textures, are wanting in France to pathological observation. The student has seldom an opportunity to learn these things in recent preparations, and he will seldom retain their anatomy in his mind, unless he can renew his impressions by frequently examining cases skilfully prepared and accurately represented. Not only is France until now in want of such a collection, but there are few original works in her surgical literature in which pathological anatomy is as well illustrated as in England and Germany.

For a long time the French have enjoyed a reputation in bandaging, which has been increased by Dessault. However the importance of this treatment may hereafter be questioned in regard to wounds, it will probably remain in favour for fractures and luxations. Simple fractures are not splinted and bandaged early, but they wait for the inflammation and swelling to subside, favouring this result by fomentations and rest. The bandage is applied not only with tasteful neatness, but with the greatest care. The old French school, and Roux, employ extension also, but the method of Dupuytren does not include this to the same extent. Patients are seldom dismissed from the French hospitals with simple fractures badly healed. The same may be said of luxations, in which they are generally acknowledged pre-eminent. Such excessive simplicity, however, as Mayor of Lausanne is lately disposed to give to bandages, (*Vid Nouveau Système de Déligation*, Genève, 1832,) by recommending three-cornered towels as sufficient for all cases, and by placing planchettes under the limb instead of splints, is calculated to do more harm than good.

The operative skill of the French surgeons cannot but be acknowledged. It is remarked equally upon the living and upon the dead body. Dupuytren was admired for it. Roux, the follower of Boyer, and the representative of the old French surgeons, operates with adroitness, rapidity, certainty, elegance, and in a truly masterly style. In fistula lacrymalis he is peculiarly expert. He reminded me by his dexterity of my respected teacher, Langenbeck at Göttingen. Larrey is the patriarch of French military

surgery; Lisfranc is remarkable for his new method, and for his ready and bold execution. It is to be regretted, that he has ceased to give operative instruction. Sanson and Velpeau are both young operators, and are to be mentioned among the surgeons whose operations are practised publicly, and can be most easily seen. Amussat is not attached to any hospital. In the operative courses, the student is furnished with abundance of subjects, receives a very full oral and manual lesson on operative surgery, and performs every operation at least twice, and commonly according to several methods. The French prefer to use the bistoury, where we are accustomed to the scalpel; their bistoury is usually of common steel and of pointed form, in order that the edge may be drawn forward in a convex direction. They always push in the director, when they wish to slit up a part, and hold this in the left hand as a guide for the knife, in preference to the forceps. On other occasions, as in removing a bandage, they make use of the dressing forceps. Many instruments are made long, which it might be supposed more convenient to have shorter. Habit no doubt has much share in producing this impression. It is also very easy to exhibit, in the practical course, which of two methods is suited to one and which to the other. There were few, for example, who were not pleased with Lisfranc's flap amputation from within outward, principally because it gives a neat and even cut surface. A very good opportunity is here offered for practice in passing the catheter, both straight and curved, elastic and metallic; advice and direction are given, and the necessary skill is easily acquired. Of the autoplactic operation, it is already said, that it will command much attention, and will find a large field for its application. It has recently drawn forth a work from Ph. F. Blandin, "*Auto-plastie ou Restauration des Parties du Corps qui ont été détruites, à la faveur d'un emprunt fait à d'autres parties plus ou moins éloignées*," 1836. The visit of Dieffenbach to Paris, in 1834, had no doubt an influence in this respect.

The medical treatment of surgical cases is in part simple, so as to have incurred the charge of carrying simplicity to excess, and in part an application of the Broussaian doctrine. This application is due mainly to Lisfranc, who has brought local bleeding by leeches into most extensive use in surgical cases. An operation is always preceded by pediluvia, &c. In consequence of the want of attention to the specific character of inflammation, ulcers are treated without due regard to constitutional circumstances. The German doctrine of ulcers is still unknown. Sometimes relaxing poultices are applied, sometimes chloride of lime, sometimes adhesive plasters, sometimes wax. Cullerier (the nephew) treats syphilis in the Hôp. des Vénériens with quicksilver, generally with the sublimate, in the form of Van Swieten's liquor. Ricord, in the same hospital, uses mercury only for secondary symptoms. In this respect, all France may be considered as divided into two great parties, that in favour of mercury and that opposed to it.

There are, undoubtedly, in Paris, a considerable number of

distinguished physicians and surgeons, among whom an honourable zeal, and an active emulation, are constantly kept alive; but these qualities are, it must be confessed, much more called forth by surgery than by medicine. A new method of performing an operation, or the invention of an instrument, forms the usual basis of a medical reputation. Of these, in fact, there are so many, that the greater part fall again into oblivion, and thus arise fierce contests for the honour of priority. They are communicated to the Academy of Medicine, which usually chooses a commission to examine and report; a lively discussion ensues, and however well they may have sustained the scrutiny, they may be obscured by prejudice, or displaced by some new novelty. Dupuytren used to say, that it was one thing to invent, but a much more difficult thing to bring your invention into use.¹

The subject which now especially attracts the attention of surgeons, is the diseases of the urinary and generative apparatus. Among the latter, Lisfranc has particularly studied the engorgement and cancer of the os uteri, and the speculum vaginæ has led to many new results. Among urinary affections, stricture and stone have been the most attended to. It has even been made a subject of complaint, that when one hears any thing of French surgery at the present day, the principal subject is still these diseases.

Strictures, which twenty years ago were cauterised in England, especially by Everard Home, are now mostly managed in France in the same manner, under the authority of Ducamp and Lallemand. Very various instruments have been imagined for the purpose, an evidence that the practice is not yet wholly satisfactory. The great difficulty is in touching the precise place of the disease. The application of the elastic, and sometimes of the conical catheter of Dessault, has still numerous partisans; but perhaps one might wish the method of bougies to be of more general application. The *sonde exploratrice* is a pencil soaked in wax, which, being made soft, will receive and retain the form of the stricture, and is graduated to determine its depth. The enlargement by incision seems now to be very little used. Mayor has advised to make way into the bladder by *cathéterisme forcé*. He takes conical, more or less pointed, tin catheters, of various thickness, and by gradual application of force overcomes the stricture. Trial of this mode has been made in the Hôtel-Dieu, and in seven successive cases the result was unfortunate. (Vid. Gazette Méd., No. 45.) Besides pain, which for the most part occasioned the interruption of the cure, bleedings, inflammations, abscesses, and other misfortunes, supervened. Happily we have so seldom strictures of the urethra in Germany, that one may pass through several surgical wards in the hospitals without finding a single case.

Stones in the bladder, however, are perhaps the principal object of attention with the French surgeon, especially since the fortunate discovery of lithotritry.

¹ C'est quelque chose d'inventer, mais c'est bien plus d'en repandre l'usage.

Lithotrity has still a severe contest to withstand, although the most violent opposition has ceased; and would, it is said, have done so earlier, had not Civiale shown more talent for breaking the stone than for defending his own reputation. The first idea of Civiale avowedly was, to destroy the stone by a solvent fluid, and he invented for the purpose a kind of bottle, which was to take up the stone and the liquid. The plan failed, in consequence of the impossibility of finding a material which would resist the fluid while this dissolved the stone. Thénard decided that these qualities could not be combined. Civiale gave up his previous plan and commenced a new one. In order to break the stone mechanically, it was necessary to ascertain that a straight and moderately large catheter would enter the bladder; this he proved on dead bodies and on himself. In making his first two instruments, he still had in view the solution of the stone; his immediate purpose was to break off small pieces, in order to determine their chemical composition. At last he invented the instrument which he now makes use of. It is a straight metallic tube, containing another tube, ending in three elastic arms, which, when drawn back, close by entering the external tube; within is the steel lithotritor, a bar with pointed knobs at the end. This bar is made to revolve by a bow acting on its external end, and thus the points at the opposite extremity grind down the stone. On its application, the urethra shows itself very extensible—a fact which has already been ascertained by its gradual dilatation. At the commencement of a lithotritic operation, warm water is injected, in order to dilate the bladder. Pain is often entirely absent, but this depends much on the sensibility of the passage; it seldom continues, however, longer than the session—that is, for some minutes. Sometimes the patient can immediately return to his occupation, but he does not always come off so easily. Should patients apply at an early period, in place of waiting, as they have been accustomed to do, for fear of the cutting operation, they will have less to suffer. Encysted or enormous stones, or excessive sensibility of the mucous membrane of the bladder, are contra-indications, which, however, are not frequent, and will be still rarer, as they depend on the procrastination of the operation. The whole duration of the treatment is usually short; sometimes it requires three months; six to twelve sessions are requisite. Immediate danger, as of injuring or wounding the bladder, is not much to be apprehended; but unskilfulness, in this as in other cases, may do mischief. Amussat has shown, that the true anatomical form of the urethra is not opposed to the introduction of a straight instrument. It is remarkable, that straight catheters have been found even in *Herculaneum*. Later discoveries, however, are directing themselves to the application of curved catheter-formed instruments. Such an one was found in Denmark by Jacobson. A steel catheter consists of two pieces lying on each other, which are separable. The two beaks are bound together by jointed pieces, and when the stone is caught between them, a uniformly increased pressure is made

upon it by means of a screw. Baron Heurteloup adopted this ingenious idea, but left out the jointed intervening pieces, and has formed an instrument, which may be moved to and fro like a shoemaker's measure. On the beaks, the opposite surfaces are set with strong teeth, and while, by striking with a hammer against the upper leaf, this is driven forward, the stone caught between them is broken. An opening in the under plate favours the falling of the fragments. The instrument is called "*Percuteur courbe à marteau*," and for large stones the percussion it produces is preferable. The disadvantages it presents are, that it may break or bend in the bladder; but the first is less to be feared with a hard mass of stone, than in wood, for example; while the latter is prevented by good steel, and by previous trial of its temper. A sudden snapping of the stone is rendered less injurious by the water with which the bladder is filled. In applying it, a solid support is used for fixing the instrument, which is effected by screwing a frame upon the bed; this takes up the middle piece of the instrument, and makes the position of the patient wholly dependent on itself. On this single ground, Dupuytren has not expressed himself wholly favourable to the instrument. Heurteloup, who now lives in London, had, up to 1833, applied the instrument two hundred to two hundred and fifty times. The latest improvements in lithotritry are made avowedly in this instrument, by Leroy d'Etiolle, Segalas, Amussat, Tanchon, Labat, Lestrangle, &c. Its improvement has, in fact, been an object of eager competition. In place of Heurteloup's immovable frame has been substituted a kind of vice, which is held during the operation by one or two assistants. It is of wood, or has in the middle a ball of lead, which embraces the *Percuteur à marteau*, and diminishes the jarring of the hammer. Besides percussion, there is also pression, in which, by means of a screw, the two beaks press the stone gradually together; this is called *brise-pierre à pression*. Finally, the two powers of pression and percussion have been united, and the instrument of Segalas will act on the stone either with the hammer or with the screw. A graduated measure is found convenient to determine the size of the stone by that of the opening of the beaked ends. Meanwhile, Civiale, except in rare cases, holds to his old method in spite of these improvements, and by no means rejects lithotomy, but directs it whenever indicated.

The enemies of lithotritry are Larrey, Sanson, and Velpeau, who are not disposed to have lithotomy sink into neglect. On the 5th of May, 1835, and in the following sessions, a lively discussion arose in the academy of medicine on this subject. Its advocates are now content that lithotritry should be the rule and lithotomy the exception, but the opposers wish to reverse the axiom. The two parties eagerly adduce statistic results and compare numerical returns, though it is conceded that the cases of lithotomy have never been so accurately recorded and collected as is necessary for the purpose of comparison, and it is difficult to say to what extent the lithotritists in giving their returns are unbiased and impartial. At

all events these seem to be constantly becoming more and more favourable. Roux said, on the occasion already alluded to, that he had performed lithotomy five to seven hundred times since 1805, but could find only one to two hundred observations of the cases. Dubois and Boyer would say the same thing. Their general result is that the fatal cases are one to five or six in adults, and one to twenty in children. According to a report which Larrey made upon lithotritry in 1830, it followed that of twenty-four stone patients in the Hospital Neckar, operated on by Civiale, thirteen were cured, and eleven died. Lately, out of fifty-three patients who were there treated, forty-five were operated on, thirty recovered, fifteen died; the others kept the stone. According to another statement (in the *Dict. de Med. et de Chir. Prat.*) there have been two hundred and forty-four patients operated on by Civiale, two hundred and thirty-six cured, five lost, three left uncured. Heurteloup has cured thirty-six of thirty-seven. Lisfranc and Dubois are both for lithotritry, and have indeed both performed the operation on themselves. Lisfranc said before the academy that he had had a stone for eighteen months, which was not recognised, as no other affection of the bladder was present; he read and consulted, and at length convinced himself that lithotritry, at least in the majority of cases, was preferable. He therefore subjected himself to ten sessions, and is now quite well. On this the society expressed their congratulations. Dubois finds himself equally well after the same operation. Sanson acknowledges that if he had a small stone and a sound bladder, though he would not have it done by others, he would operate on himself.

Velpeau, the most determined and perhaps the most powerful opponent, because he adduces his own experiments, and was formerly an adherent, acknowledges that if he had a small stone and a sound bladder he would be lithotritised. Civiale brought forward in the Academy of Sciences, on the 5th October, 1835, statistic returns on lithotomy from the great hospitals of Europe, which gave 5713 operations, 1141 deaths, and 4478 cures; while his own practice furnishes but six deaths to two hundred and fifty-seven lithotrities.

We have however to remark on this contest, that the numerical array of hostile facts furnish no certain result, and are much like reports of battles where each party exaggerates its own bulletin. Meanwhile we may content ourselves that lithotritry is daily more acknowledged as a bloodless method, as less painful, quicker, and yet surer than its rival. It must indeed be confessed, that we Germans, as far as experience goes, are not quite competent judges, since we are so fortunate as to have very few cases among us.

Velpeau has in a few years gained a great reputation. He has written on midwifery, on operative surgery, and on surgical anatomy, not only treatises but classical compendiums, has produced an anatomical and physiological essay on embryology, and several monographs. In the concours he is now for some time accustomed to come off victorious. By his comprehensive knowledge, which

extends to foreign literature, by his industry and accuracy, he makes a dreaded but wholesome opposition to new discoveries, which he subjects to his own experiments, and shows up with logical fluency. Now removed from Pitié to Charité, to take the place of Roux, who has succeeded Dupuytren at Hôtel-Dieu, he has been still increasing in zeal and industry, though in manual expertness he may not yet be counted as one of the first operators. I saw, among others, several new instruments invented by the instrument maker Charrière, applied by him.

Amussat holds every week at his house what he calls conferences. Both French and foreign surgeons are present, furnish and listen to communications, and then hold a free discussion upon the subject treated. Amussat is now busy with the torsion, with strictures of the urethra, lithotrity, reduction of hernias, and his experimental surgery. The torsion of arteries, which thus far has made little progress in France, of which I saw nothing in England, but which finds more favour in Germany, appears, if one sees and practises it with Amussat, in no unfavourable light. He makes use for the purpose, of two forceps. In the left hand is held the forceps which was originally intended for the *refoulement*, with round tips; in the right is held the pointed one, made to close with a slide. With the last the operator seizes the artery wherever it can be seen, draws it out, and holds fast by the end; with the one in his left hand he seizes it crosswise, presses it somewhat together, while by still drawing he lets it slip between the legs, until about half an inch is obtained, by which the inner coat can be ruptured. The left forceps is now more closely approximated, and the operator commences turning with the right, previously closed, so that the artery is twisted to the extent of the interspace between the two. The twisting is continued till the end of the vessel is broken through. The artery is then allowed gradually to retreat. Amussat is still making improvements in the instruments for stricture and lithotrity, especially in applying percussion and pressure. He makes the operation for strangulated hernia unnecessary in many instances by patiently continuing his efforts at reduction for twenty-four hours. Experiments on animals, especially on dogs, form with him a regular branch of surgery, which he terms *chirurgie expérimentale*. He holds the opinion that young surgeons, by operations on animals, gain not only skill but coolness in their calling, and expresses the hope that in a few years these exercises will be recognised as an essential department of instruction in all schools.

OPHTHALMOLOGY.

St. Yves, Janin, Maitre Jean, Gendron, Wenzel, Guérin, and Demours, left the ophthalmic art of the French much in the condition in which it remains at the present time. During the interval this branch of surgery has been nearly lost sight of. No one has been found to take it up as an object of especial attention, and the progress of medicine and surgery has gone on without carrying

this with it. Since the *Bibliothèque Ophthalmologique* of Guillié, which failed after a short time, (in 1822,) no journal has been devoted to this science. Now that the neglect into which it has fallen has begun to be remarked, attention has been again turned to it, at first with some prejudice, on account of its foreign aspect, which will soon, no doubt, be succeeded by a zeal inspired alike by its intrinsic importance, the recollection of the fame of former French oculists, and the eager emulation which exists in Paris. If ocular surgery is no separate branch of our medical science, it was, on the other hand, too much separated in France by the oculists, while by their surgeons, as Boyer, Roux, Dupuytren, it was too little distinguished from general surgery. In this alone lies the otherwise unassignable cause of its neglect. To a certain extent there was a purpose in this; for it was rejected in common with all other medical speculations. At present Italian, German, and English works are translated; Italian ophthalmology has been introduced into Paris by the translation of Scarpa, and by his pupil, Carron du Billards; the German, by Weller's Manual, translated, by Himly's translated introduction to ophthalmic surgery, and by Sichel, a pupil of Walther, Jäger, and Schönlein; the English improvements have become known by a translation of Lawrence. A manual of ophthalmology by Stöber, a Strassburger, but written in French, has appeared so lately as 1834. Among their own surgeons, Sanson, Velpeau, J. Cloquet, and some others, as Rognetta and Robert, are turning their attention to it. Ocular clinics, which before were wholly wanting, have been undertaken by Carron du Billards and Sichel as private instructors, and by Sanson in *Hôtel-Dieu*. What an amount of ophthalmic disease exists in Paris, and what great results may be anticipated from bringing them together, I was convinced every time I visited Sichel's clinique. But if a still larger clinique, if a separate ophthalmic hospital were erected, and this were filled with the cases which are scattered about unnoticed and unappreciated in this great city; should it be made to contain separate divisions for distinct forms of ophthalmia, and thus to admit of observations, investigations, comparisons, and distinctions, such a picture of the future is not a little calculated to charm the fancy.

After some farther notice of French ophthalmology, I shall proceed to consider a peculiarity of German ophthalmic science, and likewise the doctrine of inflammation in that country.

Roux differs from Dupuytren in his practice in cases of cataract, on which the latter operated by depression principally, while the former in *La Charité* gave extraction the preference. Dupuytren, unhappily, I had no opportunity of seeing. Roux admits cataract only in spring and autumn. From the moment of their reception the patients are put upon a course of preparatory treatment, as is the especial practice in France before great operations, frequent pediluvia are ordered, and on the morning of the operation a blister is placed on the neck, which is afterwards kept discharging. Enlargement of the pupils is rarely a part of the preparation. The

patient seats himself on a stool; the other eye is covered with a compress; the head leans against the breast of an assistant who lifts the upper lid with his finger, while he makes pressure upon the inner angle of the socket against the eye. The operator draws down the under lid, and likewise presses his finger against the inner angle, to prevent any motion of the eye in that direction. A knife resembling Richter's is employed, and the cut is made in a downward direction. After cutting the cornea, the eye is closed; the curved needle serves to open the anterior wall of the capsule; it is then withdrawn, and by means of a small spoon pressure is made downwards on the under lid against the ball, whereby the lens is half rotated, the upper side turns forward and slowly makes its way out. If there are two cataracts to operate on, the second operation is done immediately. Directly after the operation the eyes are bound with a broad compress and a heap of charpie, over which a black silk bandage is fastened with pins.

Among the new instruments, the nasal catheter of Gensoul, at Lyons, is worth recommending. It causes some surprise to observe how easily the catheterism of the nasal canal is effected by this instrument. It is of hook-like form; the terminal part, bent to a right angle, is about an inch long, corresponding to the distance of the inferior opening of the nasal duct from that of the nostril, and likewise to the form of the canal, with a slight spiral curve. It is carried into one nostril, while the handle lies perpendicular on the upper lip, close upon the bottom and external wall of the meatus narium inferior; the operator now finds himself with the point of the catheter before the opening of the canal; a slight turn outward, and a gradual raising of the handle allows the point to slip in, and with little assistance the instrument rises of itself, and by observing the lacrymal sac on the dead body the point is seen to project, and the skin to be raised. The handle now comes to be directed perpendicularly upon the upper lip. If the point is once conceded, that in consequence of changes in the nasal canal a mechanical dilatation may become necessary, this method of reaching the canal from below is at all events the best where the object is to avoid the operation, and the uncertain method of finding the passage from above, which is the secret dread of many an oculist. Even injections, which as local means in diseases of the mucous membrane of the nasal duct frequently appear very desirable, can, by means of a canula formed in this manner, be applied with little difficulty, and it is easy to see how even a catgut thread can be applied in this way. The advantage is evident, and the application of this nasal catheter exceedingly easy. I have not only been with the instrument from subject to subject, and every where introduced it without failure, but have several times done it upon the living body without producing any considerable sensation of tickling.

Velpeau has lately tried and recommended the application of a blister laid over the whole eye. It does not avail in all inflammations of the cornea, but is of great use in acute affections of the

conjunctiva and sclerotica. The mode of applying it is this. It is well to rub the skin over the lids beforehand with linen dipped in vinegar. The plaster must be large enough to cover the whole surface of the orbit; the lashes and brows need not be shaved. It is laid on the closed eye, and lint and a bandage are placed above, to cover and fill the hollows. The next day it is taken off, and the wound washed with warm water. It heals in two to three days, and by this period the symptoms of inflammation have generally disappeared.

Carron du Billards, an alumnus of Paris, is more favourable to depression and reclination than to extraction, and he has regard to the especial indication for each. In his treatise on the operation of cataract he gives a learned view of all the methods, together with their appropriate terminology, to which one must become accustomed, but which the French call tedious and "græcobarbarous." He is attached to cauterisation with potash, especially in scrofulous and catarrhal conjunctivitis and corneitis.

Sichel, the German oculist, has published "General Propositions on Ophthalmology," &c., 1833, as an introduction to a special work on rheumatic inflammation of the eye. He gives in this a short view of the fundamental principles of German ophthalmology, somewhat coloured by the Schönlein theory of morbid life, which has gained him no small notoriety.

Velpeau, whose mind, as observed above, is turned in every direction, has carefully watched this new movement in ophthalmology. When, in March 1835, he entered La Charité in place of Roux, and there commenced the surgical clinic, he expressed, in the first clinical lecture, his individual views somewhat at large on various subjects. It was on one of these occasions that he took up the subject of ophthalmology. I have never had one so favourable to notice the peculiar character of French medicine and surgery. He said it was becoming a favourite object with some, to introduce the ophthalmic treatment of England and Germany into France. He admitted that in the eye, as in the rest of the body, distinct anatomical symptoms ought to be separately considered in regard to inflammation, especially as its vessels are furnished from different trunks, the conjunctiva, for instance, receiving branches principally from the temporal and frontal arteries, the sclerotica from the ophthalmic. On this ground he distinguishes a conjunctivitis from a sclerotitis, an iritis from an inflammation of the capsule. He went no farther however in discriminating the membranes and textures of the eye, and seemed to embrace all affections of deep-seated parts under the name of "Ophthalmie interne." Again, he admitted the influence of constitutional disease in ophthalmia in general; but held that the form of the ophthalmic affection was determined only by the anatomical nature of the part attacked; and that the character of the internal disease exerted no influence upon it.

SPECIFIC INFLAMMATION.

A peculiarity of medical surgery, or of the doctrine of inflammation in Germany, is the extensive reception and progress of specific inflammation; and what is now to be said on that subject will connect itself with that which was remarked in the second chapter on the doctrines of inflammation in France and England. The term specific inflammation is applied to the peculiar condition of an inflamed part, as dependent on constitution, and on location. The view taken of this condition must be twofold. In the first place, we see an inflammatory process combined with a special constitutional disease; secondly, we admit a relation of the particular anatomical system affected, as well as of the anatomical form of the parts inflamed, to the nature of the general disease. In this local character may be traced pathognomonic symptoms of the specific internal disease. Specific inflammation, therefore, is that which, standing in combination with constitutional or qualitative disease, is thereby determined in its seat and form, and thereby makes itself known.

As respects the first branch, the constitutional cause, it is not overlooked in England, or in France, but still not recognised to the same extent as in Germany. The English distinguish specific from common inflammation; they call the former healthy, the latter unhealthy. They divide it into two kinds, that occurring through a particular state of constitution, and that occasioned by the inoculation of a poison. Among the specific diseases are reckoned gout, scirrhus, scrofula, gonorrhœa, syphilis, &c. The French, so far as they follow the Broussaian doctrine, can admit no specific character of inflammation; they are directly opposed to this doctrine as to an *entity*. Broussaian inflammation differs only in degree, and knows no qualitative distinction. As respects surgery, in which the specific local cause comes to light most evidently in its local consequences, we well know the little attention which, either in France or England, has been paid to it, especially in the view taken of ulcers. In these cases, it is admitted that the continuance of the same local symptoms must be ascribed to the same general causes, and these have been divided into idiopathic and sympathetic. We do not here refer to the admission of the dependence of local on constitutional affections, of which there is no want in England, as the memory of Abernethy testifies, nor in France, but to distinctly marked characters of the forms of disease, appearing locally, but belonging to a specific disease. These forms are not so well distinguished elsewhere, as in Germany.

The second branch of the doctrine of specific inflammation, to wit, the seat and form of the disease as determined by its specific character, and the diagnostics thence drawn, appear to be much more within the exclusive domain of German science. The English and the French have recognised it in syphilitic ulcers, the characteristic form of which they have distinguished; witness the

labours of J. Hunter, Carmichael, Cullerier, and lately Ricord ; and likewise in diseases of the skin, where they have so perfectly distinguished by their form the inflammations of the different tissues. Cutaneous diseases have been distributed into natural classes, according to their specific characters, by Willan and Bateman, by Jenner, in treating of cow-pox, by Bielt and Rayer, and by Alibert, in his "dermatoses." In regard to ulcers, local character is less regarded in these countries, at least as a basis for diagnosis. We find them rather classified as simple, inflammatory, fungous, callous, putrid, ulcerated, carious, and specific ; and Everard Home classifies the latter, in the English spirit, according to the remedies which cure them, as quicksilver, hemlock, salt water, potass, arsenic. If farther, the relation of the locality to the disease is remarked, as the location of syphilis in the throat, of scurvy in the gums, cancer on the under lip, lupus on the nose ; and the fact that gout, rheumatism, scrofula, syphilis, &c., occasion local injury is not wholly overlooked, still this specific character is very imperfectly apprehended in ophthalmology. The case is different in Germany, where the improved state of ophthalmic science has advanced the knowledge of inflammation, and especially of its specific character.

German ophthalmic science does not require any further illustration for Germans ; but as I cannot but hope that this work may find some English or French readers, I shall speak in reference to the progress it has made, and to its connection with specific inflammation. Richter and Beer not only improved the science of ophthalmic disease ; their improvements went much farther ; they not only taught the pathology of the eye, but diffused a better knowledge of pathology generally. As the eye, which was called by Beer a microcosm in the macrocosm, is composed of a great collection of organic tissues, which in the rest of the body are more scattered, as the serous, mucous, fibrous, lymphatic, vascular, and nervous system, as also of structures peculiar to it, as the cornea, iris, choroid, retina ; farther as it is also an external organ, and by its transparency exposed to view ; and, lastly, as it maintains extensive sympathies with the whole body, it is fitted above all to afford illustration of the local and general, anatomical and physiological, normal and pathological, medical and surgical conditions. What was exposed so plainly to the senses, imbibed not too much of German speculation, but just enough of German solidity and sagacity. In fact, the Germans, on the subject of the eye, have pursued that path which the French have followed in regard to the whole body with the exception of this organ. To the eye the Germans applied Bichat's distinctions in general anatomy : here they applied the name of catarrhal or rheumatic inflammation, to what in the lungs or joints had been merely termed catarrh or rheumatism ; and recognised cataract and other organic lesions as consequences of inflammatory action. They farther observed, as did the English, the local relations of the inflammatory process ; saw the injection of the serous vessels, observed the pro-

cess of traumatic inflammation after wounds with the knife, and chose for their treatment the true antiphlogistic method taught by English surgery. But, besides the anatomical relations in the pathology of inflammation, they discovered much of the operations of the whole system, and of the nature of specific disease. A score of years since, there were to be found in the ophthalmic writings of Richter, Beer, Schmidt, and Himly, excellent discriminations of the different diseases of the eye. The last named, my respected instructor, has, besides traumatic, the following ophthalmias : catarrhal, rheumatic, arthritic, variolous, rubeolous, scarlatinous, scrofulous, syphilitic, impetiginous, menstrual, hæmorrhoidal, scorbutic, intermittent, infantile, Egyptian. The descriptions given of these, show very clearly their character, and their relation to the different tissues, but less perfectly their essential variety in form. Surgery has borrowed the doctrine of specific inflammation from ophthalmic disease, and applied it especially to ulcers. Thus arose the helcology of Rust. Here we went a step farther, and added the discrimination of the form and structure of local inflammatory affection, according to its specific character ; and so perfect were the distinctions found, that we were enabled to find in the form itself the means and material of a specific diagnosis. The doctrine necessarily followed, that all organic affections, by their seat and external form, afford characteristic phenomena, by which may be recognised the character of the specific disease in combination with them. This is acknowledged as an axiom in Germany. But, as other conditions exert an influence on organic structural lesions and their external form, not only in ulcers, ophthalmias, and cutaneous diseases, but in accidental tissues ; as there are to be considered the normal character of the tissue, which is the seat of disease, the stage of the disease, the strength or weakness of the constitution, the means employed, the age of the patient, season, &c., and as these particulars are not always obvious to the senses—the diagnosis thus formed can never be so clear as to enable us to infer the presence of other symptoms.¹

The improvements thus made in surgery, and in the doctrine of ulcers, have reflected back upon ophthalmic science still greater specific discrimination, and at present we have for every form of inflammation of the eyes, not only an accurate description of the local phenomena, of the seat, appearance, colour, figure, the course of the vessels, &c., so as to be able to distinguish the disease by its specific character, but duplicate combinations are adopted, as catarrhal-rheumatic, catarrhal-scrofulous, &c., and conclusions are formed from the existence and form of certain small vessels in regard to the internal condition, as in Jüngken's abdominal vessels in the conjunctiva.

¹ Of these circumstances, I have spoken more fully in my dissertation, which appeared in 1833, under the following title : *Ad parasitorum malignorum, imprimis ad fungi medullaris oculi historiam, symbolæ aliquot.*

If now we observe the doctrine of inflammation in Germany, we shall find that, in the attempt to embrace all, the peculiar merits of the French and the English are neither unknown nor unavailed of. Neither in medicine, surgery, nor ophthalmic science could we have reached our present views, which we venture to consider as making an approach to truth, had we proceeded in the path of examination alone. In regard, therefore, to the important doctrine of inflammation and its practical relations, the true history of the subject would seem to be, that the English, following the paths of surgery, and by the observation of traumatic affection, have improved the surgical branch of the science; the French, taking the route of medicine, by observing fever, by general and pathological anatomy, have advanced the medical branch; while the Germans, guided by ophthalmic science, have effected a union of the two, and founded the doctrine of specific character. In regard to the eye itself, the system of the Germans seems to have been to extend the doctrine of inflammation, which they have here learned, to the whole of medicine; of the French to concentrate their views of general relations upon the eye, and to maintain, that there is in fact no special affection, but that the general organic life renews itself in a particular organ; and as to the English, it must be conceded that, in their late writings on the eye, they have not failed to recognise the ophthalmic science of the Germans, and, as appears by the latest edition of Lawrence's Manual, by McKenzie's Treatise of 1830, Walker's of 1834, and Middlemore's of 1835, to admit the specific character of inflammation, at least in its application to ophthalmia.

CHAPTER VI.

ENGLISH SURGERY AND OPHTHALMOLOGY.

Views on English surgery—Anatomy; pathological anatomy and museums—Stone—Modes of operating—Surgery in Edinburgh and London—Internal treatment—English military practice—Ophthalmology.

Not long since, a French writer, Baumès of Lyons, after a view of English hospitals, pronounced a judgment on English surgery, which is published in the *Gazette Médicale*, of May 16, 1835, under the title of "*Aperçu Médical des hôpitaux de Londres, ou sont traitées les maladies vénériennes et les maladies de la peau, accompagné d'une revue analytique des principaux travaux des Anglais sur ces maladies*," &c. We have ventured above to assert, that it is difficult to find fault with English surgery, and that the principal improvement needed there is, to take more cognisance of the learning of other countries, and especially of the doctrine of specific inflammation as established on the continent. Dr. Baumès

finds much more to condemn. He calls to mind the parallel drawn twenty years since by Roux between French and English surgery, and maintains that in the meanwhile the mode of operating has hardly undergone a change; that foreign discoveries and improvements have not been adopted, and that treatment has not advanced a single step. He farther reviews their surgical literature, and maintains that, since 1816, nothing important or new has appeared in this department. He also finds that, with the exception of Sir Astley Cooper's and Lawrence's works on hernia, which appeared earlier, the writings of English surgeons contain nothing new—no original ideas—no fundamental principles from which important deductions may be drawn; and that there are no young surgeons who promise to rival the fame of their predecessors. In his sweeping condemnation he includes Sir A. Cooper's late writings on luxation and fractures, diseases of the breast and testicle; B. Travers's researches on wounds of the intestines; Lawrence's writings on syphilitic ophthalmia and eye diseases generally; Guthrie on the treatment of the eyes, his observations on gun-shot wounds, on diseases of the urethra and neck of the bladder; B. Brodie's diseases of the joints and urinary apparatus; H. Mayo's remarks on disease of the rectum; Charles Bell's surgical works on great operations, on diseases of certain parts of the osseous system, and on the urinary apparatus; Arnott's diseases of the urethra, and Scott's compression in congestion of the joints.

In this judgment there seems to me to be some exaggeration, some mistake, and some praise. I must repeat here what was said in the second chapter on the comparative character of English and French surgery—that, viewed in reference to inflammation, the latter must be regarded as inferior to the former. In enumerating the distinguished surgical names at London, mention should be made of J. H. Green, Liston, Stanley, Tyrrell, Bransby Cooper, Earle, Wardrop, Langstaff, and Keate. In the writings of the surgeons named by Baumès, there are not only solid and long-established truths to be found, but, what he overlooks, new truths, and even fundamental principles of indisputable importance. Among these is the new nervous theory, developed by Charles Bell, the surgeon and physiologist. This is espoused by such surgeons as Shaw, Swan, Mayo, Earle, Macartney; and, among physicians, by Marshall Hall, Wilson Philip, Hugh Ley.

It would be hard to find out promising young surgeons, if we do not reckon among the number those who have already accomplished something; and the difficulty becomes the more evident when it is considered that in London a hospital, as an opportunity for display, is as necessary as war to a soldier. But if it be admitted that, according to general laws, talents and activity will never be wanting to second the spirit of the age, the former qualities can scarcely be denied to English surgeons, when we see so much zeal for this branch of science actually manifested in their schools. To follow out deductions from correct fundamental principles is now the especial and praiseworthy occupation of English surgery. It

consolidates, compares, applies, and collects, not only in excellent monographs, but lately in equally excellent manuals and encyclopædias, whatever has been published of anatomical and surgical, of physiological and pathological observations and facts. This well sustained and systematic plan communicates to surgery in England a quietness, steadiness, and consistence, which have gained its professors great praise. If, on the contrary, we look at French surgery, its perfection consists more in partial improvements and single discoveries, which emulation and the eager pursuit of distinct objects have brought to light, and which do not appear united or developed in connection. Competition in English surgery has not assumed the direction of inventing new instruments and methods, to the neglect of others which are approved and cherished. On one side is haste, on the other moderation; one commands very great respect; the other, as may easily be perceived, much less.

In fine, our French traveller blames the internal treatment of surgical patients, because they receive stimulating nourishment, or because fever is excited by opening means and by calomel, in circumstances in which he at the same time saw evident irritation of the gastric organs, and a demand for antiphlogistic remedies. This objection concerns itself with peculiar medical views, and especially with Broussaism, of which enough has been already said.

English surgery, as it has been developed since the days of Gale, Clowes, Reid, Wiseman, and Woodall; by Cheselden, Sharp, Pott, Bromfield, Cline; then by J. Hunter, Everard Home, Abernethy, Blizard, and the living surgeons already mentioned, among whom Astley Cooper is still prominent as the model of an English surgeon—has progressed so securely as never to have made a misstep or retrograded, and to have always conveyed the impression of unity, as if formed in a single mould.

As it has been several times repeated already, English surgery derives its present character from John Hunter, and its basis is anatomy, which in general is less pursued and cultivated for itself, than in its application as surgical and chirurgico-pathological anatomy. To extend and improve this is a principal occupation of their surgeons—as their museums, hospitals, schools, and private collections, testify. By their connection with all parts of the world, comparative anatomy is facilitated. Human anatomy is attended with confessed difficulties; and for this very reason the rare opportunities afforded seem to be the more prized and availed of. The aid of copper-plates, of models, and of preparations in tartar, are all invoked by turns. It is in pursuit of this science that so many young surgeons go over to Paris, and that so many skeletons are carried from France to England. Meanwhile, the new anatomy bill has at once increased the facility of obtaining bodies, and rendered dissection more respectable. Since the discovery of the atrocious means employed to obtain bodies, and known under the name of *Burking*, and since the late parliamentary acts, the theatres no longer purchase bodies, but the parish surgeons deliver up all those which come into their possession (and this includes such

persons as die without relations and friends to claim them, and who in many instances have been expelled from civil society for crimes) to the anatomy inspector particularly appointed to receive them, by whom they are distributed to the different schools in order, according to the number of pupils. This office now belongs to Dr. Somerville. In consequence of these wholesome regulations, the subjects are both fresher and cheaper; since they cost only the transportation and the expenses of burial. This arrangement extends not only to London, but throughout England. Formerly, the number of bodies in London was from two to three hundred yearly, whereas the first year after the new act they amounted to six hundred, and out of London to one hundred bodies. In Ireland they are much more abundant. In regard to anatomy, fine injections, in which Macartney in Dublin possesses a well-earned reputation, are well conducted; but microscopic researches, which in Germany are becoming more general and are effecting still greater discoveries, are rather neglected.

Pathological anatomy is not only earnestly and carefully pursued, but in the most systematic manner. The account of the case almost always accompanies the preparation. In the museum, you at once remark the abundance of preparations of hernia, diseases of the urinary apparatus and of the joints, strictures, stone, aneurism, medullary fungus, and accidental variations of form. Most of them are very well injected. The pathological anatomy of the eye is very little cultivated, in spite of Wardrop's efforts. Such a museum is regarded as absolutely necessary, and is among the first objects in erecting a new school; it is, in general, very judiciously contrived, not only in the arrangement of the pieces, in which the plan of John Hunter is followed, and in the preparation of a catalogue, but likewise in an architectural view. The frames are placed in well lighted rooms near the walls, and little winding stairs in the corners lead to the second story, likewise divided, and to other galleries. They appear and are used like libraries. In some hospitals, especial painters and modellers are employed. In this way the true history of the hospital is preserved. Even here, however, we recognise the love of the English for curiosities; since here, as well as among their cases of disease, these are more highly prized than plain and merely instructive cases. The museum of the College of Surgeons, the greater part of which consists of the Hunterian collection, is the largest, and contains above twenty thousand specimens; but that in Guy's Hospital, of which Hodgkin is the keeper, that in the London University, in King's College, and likewise private museums, like Langstaff's, are all excellent. In St. George's Hospital is a cabinet, not of large size but of distinguished value; it contains only pathological preparations. The most remarkable are—diseases of the joints and of the urinary apparatus; purulent cavities in the medullary substance of the heads of the bones, some of which have been recognised, trepanned, and healed; the treatment of enlarged middle lobe of the prostate by perforation; among diseases of the bones, the falling in of the head of the femur

in old age, which resembles the healing of a fracture of the neck. It is, in fact, a great satisfaction to look around in this collection—and the more, as it is evidently a source of satisfaction to the English to exhibit these treasures of theirs. Some glasses are elosed with small pieces of caoutchouc; but the usual mode is to fix upon the edges of the jar a flat ground glass or a hornblende, and a plate of lead with a double bladder. In order to estimate the merit of the English in surgical and pathological anatomy, one need only call to mind aneurisms, hernia, diseases of the bladder, aecidental tissues, and, above all, medullary fungus.

Diseases of the urinary apparatus, which are the objects of particular attention, seem to be endemic, and connected with their peeuliar mode of living. A stranger soon remarks the deep colour of the urine, and the yellow sediment adhering to the vessel. In the collections of caleuli, it is easy to recognise the lithic acid stone, and at first sight to distinguish it from the heavier, harder, and rarer mulberry species, consisting of oxalic acid; as well as from the lightest, largest, and most frequent, formed of the phosphate of lime. The more slowly a stone forms, the harder in general it is; and hence one can, with some probability, draw a conclusion in regard to their chemical character. In the museums, most of them are sawn across so as to expose the concentric rings, and there is frequently seen a nucleus of hardened blood or mucus. They are marked with the history of the case, their weight, their composition, and the operator's name. According to a summary contained in the sixteenth volume of the Medico-Chirurgical Transactions, the geographical distribution of urinary calculi is as follows:—In Aberdeen (Royal Infirmary) there appeared, in ten years, sixty-eight—in thirteen boys, five women, and fifty men; in Bristol (Infirmary), in ten years, thirty-one cases; in Edinburgh and Leith, (Infirmary of military surgery,) forty-one; Liston, in Edinburgh, performed in ten years thirty-four operations; in Glasgow Infirmary, there were thirty in twelve years; in Hull Infirmary, two and a half to three annually; in Liverpool, ten operations in thirteen years; in Norwich Hospital, one hundred and twenty-two cases in eleven years; in St. Thomas's Hospital, London, seven and seven tenths annually; in the London Hospital, forty-one in ten years. In Dublin, on the contrary, Carmichael reckons only six operations to occur annually. Among the numerous causes alleged why the disease occurs in Ireland and in seaport towns so seldom, the use of unfermented liquors is the most probable. The latest work on calculus is by J. Gross, the celebrated surgeon in Norwich, where operations are the most frequent. In the Norfolk hospital there occurred, in sixty years, 704—of which 35 were performed on women; 611 were cured, 93 died, or one in $7\frac{5}{9}\frac{2}{3}$. Another estimate gives the average of operations for stone, in London, at 47 yearly; in the rest of England and Wales, 64; together, 111. One case in five is said to terminate unfavourably, as is the case in Paris.

Lithotomy, so particularly improved in England, will now be considerably restricted by lithotrity. The latter method already

begins to extend itself. Heurteloup practises it exclusively, and is countenanced in so doing by Brodie; Castello also, Combe, and in Dublin Crampton, defend and practise it. It is intended, if the plan is not actually carried into effect, to found an especial hospital in London for twelve patients of this description.

The operative practice of English surgery is anatomically sure, quiet, and prudent. One day in the week is set apart for operations in the hospitals. Several of the hospital surgeons are commonly present together, and support one another by advice and assistance. In important cases, the practice adopted is the final result of deliberate consultations. The patients are introduced—at least this was the custom in St. George's Hospital—with a bandage over their eyes, and keep this till they are removed. The amphitheatre is filled with spectators; the light is introduced from above; the operation table is simply constructed; the instruments are of good steel, sharp, and not complicated. The operation usually proceeds in great quiet; rapidity of execution is very little, perhaps too little, regarded. New modes are less esteemed than those which are already approved, and have been practised throughout England. Bleeding vessels are tied with Bromfield's hook, and secured with the ligature, (I was not witness to the employment of torsion,) one end of which is left out of the wound.

In amputations the circular section is employed, but flap-amputation is resorted to in the leg when an artificial foot is to be worn. The bandage is intended to promote healing by the first intention, and all other dressings of linen or flannel are omitted. The fomentations are prepared with cold water, or brandy and water, but are not always used. Lint is little employed; the sticking-plaster is excellent, but the suture might be more frequently resorted to with advantage. As an example of the simplicity of their present mode of proceeding, I here cite Liston's practice. He frequently performs the flap-operation, making the first incision from without inwards, the second in the opposite direction. He uses a plaster prepared from isinglass, a strong solution of which in spirit, saturated at the temperature of boiling water, is spread on strips of oiled silk. In amputation the strips are laid between the sutures, and stick so fast that the threads can be safely removed at the end of twelve hours. The plaster does not irritate the skin. After amputation the wounded part remains quiet six hours before the above dressing is applied. The limb is then laid in a proper position, kept high and cool, and bathed with cool water. In healing by the second intention, the granulations are maintained, not by bread poultices, but by warm water, covered with the same oiled silk to prevent evaporation. As the ulcer heals, however, mild astringent or stimulating means are applied—as zinc, copper, or alum.

The finding and tying of vessels is, in consequence of the frequency of aneurisms, carried to great perfection; and there is abundance of practice in the treatment of accidents. About forty of these, on an average, enter the London hospital weekly. The non-union of fractures of the neck of the femur is acknowledged;

but in all fractures, however complicated, it is preferred to attempt union rather than resort to amputation.

The plastic operation deserves to be more extensively introduced from Germany. The merits of Graefe and Dieffenbach, however, in this respect, are acknowledged. Keate in London, and W. Ferguson in Edinburgh, have effected restorations of the nose.

Specific inflammation is, as hinted in the preceding chapter, not so fully recognised as in Germany. That the specific character of ulcers—German *heleology*, in short—is underrated, may be inferred from two late treatises on ulcers of the leg by W. Eccles in 1834, and J. Spender in 1835. Gout, syphilis, and scrofula, are regarded as the principal fundamental constitutional affections. Hence it happens that the medical treatment of surgical diseases does not appear altogether satisfactory. Besides this, the separation of medicine and surgery, at least in London and England generally, seems to be still too great. It is known that the London schools have an especially anatomico-chirurgical character, and this character also prevails in the London practice. In fact, the number of practitioners who at once pursue surgery, medicine, and even pharmacy, is very considerable; but these, mostly educated in the London hospitals, have in general a too empirical and too exclusively surgical bias, or rather an insufficient general and medical education. But, in truth, the high position which belongs to surgery it derives principally from its connection with medicine. In regard to Edinburgh surgery, very various judgments are formed in London, which the author has not been able to verify by a personal residence in that city. There is a spirit of rivalry which attempts to undervalue it, but this seems to be unjust. The Edinburgh surgeons must at least be better anatomists and physiologists, and have a more finished education. The distinction made between the two schools is, that in London the student gains a very perfect knowledge of anatomical structure, which knowledge is in general too little connected with physiology and (internal) pathology. In Edinburgh, on the contrary, anatomy is taught with especial reference to physiology and general practice. On account of this distinct point of view from which anatomy is regarded in the two schools, it is said to be very possible that a great part of the Edinburgh pupils would be rejected, on an examination in anatomy, at the London school of surgeons, and a still larger part of the London pupils would experience the same thing at Edinburgh. That the Edinburgh surgeons are better pathologists and scholars may be inferred from this, that the study of medicine and surgery is there pursued in connection, and likewise from the fact that the degree of doctor of medicine is not obtained till after four years of academical instruction, and that there is no degree of doctor in surgery.

Among the internal means employed in surgery, are bleeding, quicksilver, cathartics, and strengthening food. Sometimes, however, the medical part of the treatment, in the hospitals, is given to a physician, and then the physician and surgeon attend the patient

jointly. Some surgeons refuse to admit this participation. The hospital surgeons, indeed, who belong to the class of pure surgeons, as distinguished from the general practitioners, possess the requisite medical education to undertake internal treatment. In London, the proper English doctors of medicine, fellows of the College of Physicians, based upon the universities of Oxford and Cambridge, stand higher, both in classical and general education, than even the pure surgeons.

ENGLISH MILITARY SURGERY.

Every English regiment has a surgeon and an assistant surgeon. The former has the rank of a superior officer, and advances according to seniority, but never beyond the grade of the oldest captain. The latter has the rank of a subaltern officer, and advances to the grade of the oldest lieutenant. Both are partly doctors and partly examined surgeons, which depends upon the different management of the schools in England, Scotland, and Ireland. Their uniform is like that of the officers, but distinguished by a black plume on the hat. The assistant surgeons have, whether on duty abroad or at home, 7s. 6d. a day, about £132 yearly; in the cavalry, one shilling more for a horse. The full surgeons have, both in the infantry and cavalry, 11s. 4½d., about £220 yearly, and must keep a horse. Half pay for the time when one is not in active service, six shillings. Each full surgeon, after serving seven years as such, or ten years generally, obtains an increase of pay to 14s. 1d., the half pay remaining as before; after twenty years' service, he receives 18s. 10d., half pay as before; and when he becomes disabled by service, ten shillings; after thirty years, he receives fifteen shillings as half pay. The apothecaries receive ten shillings daily. A higher rank is that of deputy inspector of hospitals; they have 25s. and 12s. 6d. as half pay. Inspectors-general of hospitals have £2, and for half pay, £1 daily. The hospital mates receive 6s. 6d., in foreign countries, 7s. 6d.

The highest distinction belongs to the army medical board, of which Sir James M'Grigor is director-general. This board, however, does not form the medical establishment of the whole army. Its existing constitution, in fact, is due to the wars in the Peninsula, in which M'Grigor was peculiarly prominent, and gained great credit. The army medical board includes only the infantry and cavalry in England, Scotland, and the colonies—that is, about fifty thousand of the ninety thousand which constitute the whole army. The royal guard in London, the artillery and the numerous regiments stationed in Ireland, are independent of it. The military surgeons in Ireland report to their own director-general in Dublin, now Dr. G. Renny; the artillery, to Sir J. Webb; the guard, to the field-marshal of the army.

There are no especially military medical schools, as in Austria and Prussia. The dependence is placed on finding well educated medical men for military service by means of sufficient rewards

and honour. How great the number of aspirants is, may be inferred from the fact, that when the expedition against Spain, under Evans, was proposed in the year 1835, so many young physicians solicited the employment, that two companies might have been formed from them alone. There is a general hospital for the army at Chatham, six miles from London, under excellent regulation, with a good library, and a constantly increasing museum of anatomy and natural history. The cabinet of natural history is collected from all parts of the world, and the birds and reptiles are especially worthy of notice. Most of them are not set up, but lie in glass cases side by side, partly for want of room, partly because, for scientific purposes, this has been found sufficient, and a convenient mode of preserving them. The reports which the military surgeons render monthly, are commonly expressed in conformity with the nosology of Cullen. They are so full, that the report on an individual, taken together, might well be termed his pathological biography. Every new assistant surgeon is obliged, after his examination by the army medical board, and before his nomination, to go to Chatham, and there pass from four to ten weeks in learning the routine of medical duty.

When a regiment is distributed into several cantonments, the station of the principal surgeon is generally at the head-quarters of the corps; that of the assistant with the strongest detachment. The state of health of the whole regiment is enquired into weekly. The surgeons must regularly visit the hospital twice a day. The assistant keeps the sick-list, bandages, dispenses medicine, bleeds, &c. Every great operation must be reported before it is performed. Both surgeons have to provide their instruments, and keep them in order. The regiment furnishes the medicines. The upper surgeon directs the meat and bread for the sick. There are also waiters attached to the hospital, a hospital serjeant, a nurse, and an orderly man. The diet, which for the most part is alike for all English hospitals, is the following:—

1. *Full diet*.—For breakfast, one pint of gruel or rice; at noon, three quarters of a pound of meat, one pound of bread, half a pound of potatoes, one quart of table beer; at supper, one pint of oatmeal gruel, or rice broth.

2. *Half diet*.—Morning, one pint of oat gruel, or rice broth; noon, half a pound of meat, three quarters of a pound of bread, one pound of potatoes; evening, one pint of oat gruel, or rice broth.

3. *Small diet*.—Morning, tea; noon, quarter of a pound of meat, half a pound of bread, half a pound of potatoes; evening, one pint of oat gruel, or rice broth.

4. *Fever, or spoon diet*.—Morning, tea; noon, half a pound of bread, or sago, instead of a part of it; evening, tea.

One half shilling daily is the estimated expense of each patient. As respects the mortality among the troops, of fifty-three thousand, one hundred and fifty-three men who served in the colonies, there died, during a period of ten years, an average number of three thousand and thirty-seven yearly—that is, six times more than

died at home, and thirteen times more than in the French army, which for six years in France buried only 1.9 per cent. In estimating this difference, however, many allowances must be made.

The English military surgeons have greatly distinguished themselves by their learning, and by original works. Among their eminent authors of this class, are Hennen, Sam. Cooper, Guthrie, Hutchinson, Haunnick, Sir James M'Grigor, Sir W. Burnett, Vetch, Sir A. Halliday, Bacot, Marshall, Murray, Dease, Lindsay. They have likewise been zealous cultivators of natural history in foreign climates, and have studied the geographical distribution of disease. An especial course of lectures on military surgery is delivered in Edinburgh by Sir G. Ballingall, and clinical instruction united with them.

The medical service of the English fleet was formerly very bad; the surgeons of the royal navy had no rank in the fleet, and what are now the assistant surgeons, were called, and were, in fact, doctor's mates. The condition of the latter still admits of improvement, both in regard to their pay, and their relation to the officers, with whom they do not associate or mess. The distinction of full and assistant surgeons is maintained in the navy. Those who apply for admission, must be neither under twenty nor above twenty-six, must have a sufficient knowledge of Latin, have been assistants to an apothecary, and have visited hospitals and attended lectures not less than two years, in London, Dublin, Edinburgh, or Glasgow, as is required of the surgeons in those places. A preference is also given to those who, by the knowledge of diseases of the eye, and of other branches, as legal medicine and natural history, have especially qualified themselves for the service. For the rest, the pay of the fleet surgeons is small, and their half pay for long services is estimated too low. In this respect, an improvement is expected, together with which the qualifications required for admission may also be increased.

In the merchant service, the surgeon receives, whatever the direction of the voyage, from £50 to £60 yearly.

OPHTHALMOLOGY.

Saunders, the actual founder of English ocular science, died in 1814, in the flower of his age. He founded an institution for this branch of surgery, and commenced the school in which Travers, Lawrence, Tyrrell, and Earle, have followed him. Wardrop and Guthrie are also to be mentioned as surgeons, who devote themselves particularly to the eye. Wall, Adams, Phipps, and the now celebrated operator, Alexander, were oculists, and distinguished as such. Among the institutions expressly devoted to ophthalmic cases, are the Royal Infirmary for the Diseases of the Eye, in Cork street, Burlington gardens, where Alexander is oculist, and Sir Henry Hallford physician; the London Ophthalmic Infirmary, in Moorfields, the founder of which was Saunders; and the West-

minster Infirmary for the Diseases of the Eye. Tyrrell and Guthrie are attached respectively to the two last. There are also similar establishments connected with the large hospitals.

The English appear to have much still to learn in ophthalmology, both as respects the diffusion of a general knowledge of the subject among physicians and surgeons, the more accurate distinction of qualitative constitutional or specific inflammation, as referred to in the preceding chapter, and the improved methods of operating. Among their most useful remedies, are the red precipitate, the nitrate of silver, both in the form of ointment (thus Guthrie considers a combination of ten grains of the caustic with one dram of simple ointment, employed in connection with blood-letting and aperients, as a real panacea in chronic scrofulous corneitis and hypopium) and in a solution, prepared with one to two grains to an ounce of water, and even stronger, for it is observed that a part of the salt is decomposed by the mucus of the eye. This solution is applied with advantage in chronic conjunctivitis, and especially in blennorrhagies. Strychnine is given in amaurosis internally and endermically, in half-grain and grain doses; and belladonna in inflammations, especially of the iris.

Guthrie is a great friend of local stimulants, and Lawrence recommends taking blood in considerable quantity at once, the more as he regards chronic ophthalmia as the same with acute, allowing for the difference in duration and intensity. When the disease depends on constitutional causes, among which he especially recognises scrofula, gout, syphilis, and rheumatism, he puts the patient on spare diet, or strengthens the system by nourishment, good air, exercise, and gives as internal remedies blue pill, extract. colocynth., extract. rhei, &c.

Their operative methods might be improved, especially in operations about the eyelids, for ectropium, entropium, and distichiasis. The comparative advantages of extraction or depression of the cataract are variously estimated. I saw extraction performed on the right eye of a woman, while the patient lay upon her back. The operator stood behind the head, held the eyelid with his left hand, and with his right divided the cornea upwards with a knife resembling that of Richter. A needle opened the capsule, and by pressure with the finger, the hardened lens was forced out. The whole operation was done quietly and prudently. The eye was then loosely dressed. The instruments are mostly very well finished, the handles short, those of the needles round, or with eight edges. Jacob, in Dublin, in order to be secured against the breaking of the knives in operations, adopts a peculiar practice. He takes sewing needles and bends them; out of twelve, eleven commonly break; the twelfth is selected for a cataract needle, polished, and set in a cedar handle.

Weller's manual is translated into English. Walker's Principles of Ophthalmic Surgery is the latest English work. This author has adopted something from German science, and has appended a vocabulary of French and German synonyms. The

English, in general, acknowledge the merits of foreigners, but on this subject express their astonishment at the three hundred technical terms, which have been counted in German ophthalmology, and term them "the product of the laborious wit and dulness of the Germans." In short, as they themselves express it, they respect German talent wherever it appears, but imagine that our professors must be authors and nomenclaturists by profession, and say that there are no lucubrations enveloped in such thick mist as the German. They are partly right.

CHAPTER VII.

CHANGES IN THE CONDITION OF MEDICINE IN FRANCE.

Before the revolution of 1789, there were in France eighteen colleges with power to confer the degree of doctor, which was very easily obtained, and, in fact, an article of traffic. In Paris, the corporation of physicians had an inconsiderable building near the Hôtel-Dieu; and the corporation of surgeons, though of lower rank, possessed the beautiful edifice which is now the school of medicine. Afterward, in August, 1792, all universities and faculties were overturned, and anarchy reigned even in medicine. In the third year of the republic, 1794, the national convention founded three *écoles de santé* for the whole country—at Paris, Strasburg, and Montpellier. Medicine and surgery were now united, the school of medicine founded, twelve professors were appointed for Paris, and a definite plan of study was to be pursued by the *élèves de la patrie*, and the means furnished gratuitously. It was also determined that all prescriptions should be written in French, perhaps only a concession to the ignorance which prevailed of the Latin; but the regulation continues. It was only, however, the select number of *élèves de la patrie* who enjoyed the privilege of gratuitous instruction. New arrangements were made in 1803, by which the three *écoles de santé* received authority to create doctors of medicine and surgery, and the law was promulgated that four years of study should be required before obtaining this degree. A second class of medical personages was likewise created, the *officiers de santé*; these were not obliged to study at the three great schools already mentioned, but had permission to practise after being examined by a jury of medical persons. In 1820, new orders were issued in regard to the universities. In Paris, there are now twenty-five professors; a definite course of studies is still prescribed, and the *officiers de santé* are continued throughout France. Of the arrangements of the Paris school, we have already spoken in the first chapter.

The *officiers de santé* are not obliged to complete the course of

instruction required for the doctors; they must study three years at one of the universities, or at a secondary school, and may, instead of this, pass five years in a country hospital, or live six years with a practitioner. They also undergo three examinations at the university, with an outlay of 250 to 300 francs, or they are examined by a jury of medical persons. They can practise only within certain limits, and all great operations are interdicted. They can, however, be very little controlled.

Among the qualifications for a degree of doctor in medicine, are a thorough school education, a diploma from the *Faculté des Lettres*, as bachelor of letters, and one from the *Faculté des Sciences*, as bachelor of sciences. These resemble our own proofs of maturity. The next condition is to take inscriptions at a university of medicine for five years, and to receive five examinations. These are commonly made at the end of each year. The first is in natural history, pharmacy, physics, and medical chemistry; the second in anatomy and physiology; the third in medicine and surgical pathology; the fourth in hygiene, legal medicine, *materia medica*, and practice; the fifth in *clinique interne* and midwifery. These examinations are held openly in the school of medicine. The expense of all the inscriptions amounts to 1100 francs. A foreign physician must, in order to become a doctor, submit to the examinations, and pay the sums for the inscriptions. This done, he is permitted to practice all branches of the profession where he will. There is, therefore, no farther examination under public authority.

The apothecaries in France form a very learned body. No one can practise pharmacy, till after examination by them; no one can dispense who prescribes, and no one prescribe who dispenses. The school of pharmacy is greatly respected. There are also herborists, so called, who must likewise be examined.

As much fault is found with the existing regulation of medical affairs, attention is now turned to the subject of reform, especially in the matter of education. As early as 1829, the minister of the interior addressed a series of questions to the Academy of Medicine, respecting the reorganisation of the whole system. The academy appointed a committee, which did not report till October, 1833, after the disturbances of the revolution of July, and the agitation of the cholera, had passed, and after their attention had again been called to the subject by M. Guizot. The report was laid before the academy by M. Double. In order to meet the increased demand for instruction, the committee proposes to add to the three existing faculties of Paris, Strasburg, and Montpellier, three others, one in Lyons, one in Rennes or Nantes, and one in Toulouse or Bordeaux. To make the examination more strict, the examiners are not to be taken from the members of the faculty simply, but (somewhat as in our state examinations) one third shall be from among the medical personages of the town or the vicinity. The report was accepted by the academy, and sent to the minister. Among its other suggestions of improvement, are the suppression of the *officiers de santé*, the prohibition of the secret remedies of

quacks and of certain abuses in medical and pharmaceutical practice, and the acknowledgment of foreign degrees. Patents for nostrums shall be issued only after the approval of the same by the academy of medicine; the remedy must be new and useful; it must be offered for sale at the regular drug stores, and after the expiration of the patent, the composition must be published; the tax for such patent shall be 500 francs for five years, 1000 francs for ten years.—According to a calculation which assigns one physician to two square miles (French), France requires sixteen thousand. Admitting that practice is commenced at the age of twenty-four, the annual mortality, according to general laws, would be three hundred and sixty-two, and, in fact, the number of physicians admitted by the three faculties has been for several years about three hundred and ninety. In order to secure a uniform distribution of the number, notwithstanding the unwillingness of practitioners to resort to the poorer districts, it has been proposed, that, for the future, both physicians and apothecaries shall pay a certain sum for the right to practise, which shall be proportioned to the department and to the population of the community.

This subject of reform is frequently urged in the *Lancette Française*, and gives to this journal its peculiar political colouring. Its criticisms are mostly personal and tinctured with party spirit, and its tendency is Saint Simonian. Its views, complaints, and propositions of reform, are singularly unreasonable. It maintains that the school of medicine is useless, and ought to be abolished; that instruction ought to be gratuitous; that as the number of physicians and surgeons is too large, a limited number only should be admitted into the medical schools (as in the *Ecole Polytechnique*, about three hundred are admitted at the commencement of a cursus, after a concours, in which about one in three succeeds); that the examinations should devolve on persons chosen at the time by lot; that of the twenty-four teachers of the medical faculty at Paris, at least one half are too old, or too insignificant, or too negligent, &c.

This year, a commission has been appointed by the government, to make proposals respecting the reorganisation of the medical establishment, and among its members are Orfila, Andral, Pariset, Donn  , &c.

CHAPTER VIII.

CONDITION OF MEDICINE IN ENGLAND, AND ITS REFORM.

Medical corporations—Sketch of the College of Physicians, College of Surgeons, Company of Apothecaries in London—Constitution and condition of these corporations and their members—Accoucheurs—Universities of Oxford and Cambridge, Scotland and Ireland—The reform question—Medical politics—London University and King's College—Prospect of reform.

In Great Britain and Ireland, the physicians, surgeons, and apothecaries, are united in three corporations, which, having

different rights, and being in part old, in part new institutions, do not combine to form a consistent whole. In England, there exist as scientific bodies, and at the same time as acknowledged authorities, three colleges in London, viz:—

- 'The College of Physicians,
- 'The College of Surgeons,
- 'The Society of Apothecaries.

There exist also, as institutions of medical education, in England, the two universities of Oxford and Cambridge, and especially the various hospital schools and other private schools, in London and in the provinces.

In Ireland, there is at Dublin a college of physicians, a college of surgeons, and a society of apothecaries; there are also a university, special hospitals, and schools.

In Scotland, there are the four universities of Edinburgh, Glasgow, Aberdeen, and St. Andrews; in Edinburgh there are also private schools, a college of physicians and a college of surgeons, which last also includes the apothecaries.

Doctors of medicine are created at the above universities, and afterward, in order to become members of the college of physicians, take an examination at one of the aforesaid colleges. In England, no actual physician is at the same time a surgeon; but in Ireland and Scotland, a doctor of medicine may be a surgeon also. The apothecaries in England can at the same time pursue medical and surgical practice; in Scotland, surgical; in Ireland, neither of the two.

The College of Physicians in London was founded under Henry VIII., and therefore before England and Scotland were united. Its first president was Linacre, who, as well as many subsequent presidents, stood in near relation to the universities of Oxford and Cambridge. It possesses very extensive powers for the maintenance and extension of medical study and learning, and for the control of medical practitioners generally, in London and within seven miles of that city.

These privileges, however, have for some time increased this college only intensively, not extensively; in fact, in the latter view, its influence has rather lessened, or been left unemployed, and little use has been made of circumstances to extend its control over education and medical policy. Neither has it employed its powers in adapting such changes to its constitution by by-laws, as would have corresponded to the change of times. It has greatly limited the number of its members, and has divided them into fellows and licentiates, thereby creating distinctions which are constantly becoming less useful and less appropriate. In conformity with the ancient ecclesiastical distinctions which prohibited all except adherents to the established church to study at Oxford or Cambridge, it has excluded all catholics and dissenters from fellowship. Even now, every candidate for this honour must have received a doctorate of physic at these universities, and consequently have signed the thirty-nine articles; or he must have been a doctor at the Dublin

university, and afterward at least have inscribed himself at an English university. In fine, the College of Physicians of London, where surgery was already at so low an ebb, has excluded all surgeons from their association and regard; the same is the case with apothecaries and accoucheurs.

The College of Surgeons was established as a special corporation by act of parliament, in the year 1745. It was again dissolved, in consequence of some accidental irregularities in its proceedings, and the present College of Surgeons founded in the year 1800, by George III., for the promotion of surgery, for the examination of surgeons for the army and navy, and of other individuals who wish to become members. Its original constitution empowered it only to subject to the scrutiny of its court of examiners those who should voluntarily express a desire to become members. Its high character, however, and the consideration attached to membership, are such, that at present no surgeon, either in London or in England, would commence his course of practice, without submitting himself to the required examination. In the two first years of its organisation, three hundred members were admitted; in the last two, seven hundred. This college excludes medicine, as well as midwifery and pharmacy, from its course.

The apothecaries, who, unrestrained by any authority, exercise at once medicine, surgery, and obstetrics, were united in one corporation in the year 1815, very accidentally, on occasion of the then existing apothecaries' company—a mere trades' union—addressing a petition to the minister to obtain a reduction of the duties on glassware. It now combines privileges in itself to which the other two cannot pretend. The Apothecaries' Company or society assumes the examination of general practitioners in England—that is of those practitioners who combine with the trade in, and the preparation of, medicinal articles the practice of medicine, and likewise of surgery and midwifery. It assumes an oversight of all medical articles exposed for sale. It has a court of examiners, and its admitted members are called licentiates. As belonging in a manner to the class of trading people, they are looked down upon by the regular physicians and surgeons; but they have the advantage in point of number, and are cheaper to their employers, as they charge only for their medicines and not for their attendance.

There remain of the medical corps the mere dealers in drugs, the druggists and chemists. Then there are oculists, aurists, and dentists, all of whom practise on the freest terms, for they are without examination and without control.

The College of Physicians—the union of physicians properly so called—is very small in number. From 1772 to 1832, this college, according to one statement, has admitted only one hundred and sixty-nine fellows, and since 1823 only one hundred and seventeen licentiates. The total number of estimated members in London is about four hundred and sixty. There are also licentiates admitted beyond seven miles distance from London, who are called extra licentiates, but are few in number. These physicians demand

for their professional services, in proportion to the price in other countries, a very high fee. Advice given in their own houses costs the patient half a guinea or a guinea; a visit at the patient's house one to three guineas. Every mile beyond London is reckoned at a guinea.

Among the immediate regulations (by-laws) of the college are the following:

No one can be a candidate for a fellowship unless he has all the rights of an Englishman by birth, is twenty-six years of age, and has been doctor of physic in Oxford, Cambridge, or Dublin. The candidate must not have traded in any secret remedy, or have supported himself by practising the art of surgery, midwifery, or pharmacy; he must have been examined and approved in physiology, pathology, and therapeutics, and likewise in Hippocrates, Galen, and Aretæus. Again, any member who commits a misdemeanour, or who practises pharmacy, midwifery, or any manual labour, is expelled. No one can be a fellow, unless he has fulfilled the above conditions, and has been a candidate for one year. The admission is voted by secret ballot; the ceremony of admission is solemn, and accompanied with an oath; the new member pays £135.

Licentiates are those doctors of medicine who are examined by the board of the college, but have not studied at Oxford, Cambridge, or Dublin; having graduated at a Scotch university or abroad. They pay £24 on admission. They cannot be chosen officers of the college, and have no right to use the library or the other collections. The president, however, has permission to propose one of the licentiates every two years as a fellow. There are four censors and four curators, out of which number the president is chosen yearly. This highest medical honour is now possessed by Sir Henry Hallford, who has been president ten years without interruption. The registrator is Dr. Francis Hawkins. The yearly income, principally consisting of rents of houses which have been bequeathed to the college, amounts to about £4115 yearly. The college has a handsome building in Pall-Mall east, near Charing Cross: here are—a library, a collection of articles of the *materia medica*, and the assembly room. A large meeting is held four times a year, and essays listened to, which are read by the registrator; once a year the Harveian oration is delivered in Latin. These assemblies are numerous and even fashionable. Some of the ministers and members of both houses are usually present, for the physicians proper in London maintain a high rank in society. By their education at the universities with the noblemen of the country, they form associations, which they endeavour to retain both in their private relations and as members of the society. These meetings are held in the evening. The president sits before a green table; near him are placed the most distinguished guests; on his right stands the secretary; the hall does not contain nearly seats enough for those present, who appear in shoes; tea is served in an adjoining apartment, and after two hours the meeting is closed. The College of Physicians is likewise a scientific society,

and has published three volumes of transactions, a full edition of Harvey's works, and the *Pharmacopeia Londinensis*, the latest edition of which is some time since exhausted. Lectures are also delivered under its sanction. It is a recognised authority, and as such must take the responsibility of having gradually thrown the practice of medicine, for the most part, into the hands of the surgeons and apothecaries, and of having neglected the care of the public health. The college consists of members who individually stand high in scientific and general education, and who have never stained their character as gentlemen for the sake of money, which it would have been easy for them to obtain, but who have kept less in view the purposes of science than their external relation to the society, and have thought more of their rank than of their attainments as physicians. In short, the college of physicians has marred its good qualities by the fault of being too exclusive.

The whole number of physicians proper, or doctors of medicine in England, is reckoned at about six to seven hundred.

The College of Surgeons consists merely of members distributed in all England and Wales. Their peculiar province is surgery; but as the mere surgical practice is small, and as on account of the small number of actual physicians there is a demand for the latter, they also treat medical cases, and have generally an apothecary's shop, receiving in the latter case licenses from the association of apothecaries. This plan is not adopted, however, by those who are termed pure surgeons—who are the most respected, and the number of whom in London amounts to about one hundred—who alone are operative surgeons and teachers in the hospitals. The council consists of twenty-one members, all of whom live in London, who fill their own vacancies, and select for this purpose from the number of pure surgeons only men of "high moral feeling." They have especially the whole conducting of the college. The college building is a large edifice in Lincoln's-Inn Fields, which at this moment has been built out and enlarged. It contains the famous Hunterian museum presented to it by parliament, which is still increasing and well kept, but not wholly arranged or set up. A library has been collected within ten years, which is rich in the departments of medicine and surgery, and is open to all the members, and even to strangers. It contains nearly 20,000 volumes, and in its arrangements and appointments has taken that of the British museum as a pattern. In the museum, which is well known to contain a systematic course of preparations for the illustration of animal and likewise vegetable structures, both in healthy and morbid condition, there are of the wet preparations about 8087 pieces set up—perhaps three fourths of the whole—and of the 7697 dry perhaps a seventh part is set up; so that on the whole about one half is in a condition to be used. The conservator, Clift, is still employed in putting them in order, and preparing the catalogue and commentary, which we have already seen in part in German. It is open three times a week, from ten to eleven o'clock,—viz., Monday, Wednesday, and Friday—but to strangers every

day. Every year thirty lectures are delivered, in as many hours, by two teachers appointed by the council, to which the members have the right to be admitted, and the older students of the hospitals obtain permission. From time to time there appears a volume of Transactions of the Royal College of Surgeons in London. The income arises principally from the fees for the examination certificates, and hence is uncertain. It amounts annually to about £11,000, and the expenditure to £8,000, of which £2,000 is for the museum alone, £900 for the library; their capital amounts to £70,000. The number of members of the college in all England and Wales is about seven thousand eight hundred, of whom about two hundred are pure surgeons; the rest belong also to the apothecaries' association, have an apothecary's shop, and are called surgeon apothecaries.

The council of twenty-one members has a president, now T. Andrews, and two vice presidents, Sir Astley Cooper and Sir Anthony Carlisle. From these there are chosen ten examiners, which dignity generally devolves on the oldest in succession. In London there are reckoned two thousand members; the members of the council must reside in London. The rules of the examinations are stated above. (s. chap. i.) Between 1823 and 1833, there were four thousand six hundred and twenty-one candidates examined, of whom three hundred and sixteen were rejected. The price of the examination is £22; most of them, say nine in ten, are examined but once. The ceremony commences at 6 P. M., and continues usually till midnight. The ten examiners receive together five guineas for each candidate examined; this, divided, brings to each examiner for each evening about six guineas; and this is repeated about fifty times a year. As the examiners are almost all teachers at the hospitals, their respective pupils are not examined by them; each examiner can put questions at all times.

The surgeons have in this manner, besides elevating their art, raised themselves in their external relations. Sir Everard Home was the first surgeon who received the honour of knighthood. All write more or less medical prescriptions, and the medical practice of a surgeon is reckoned at about nine tenths of his whole professional occupation.

The Apothecaries' Company unites the practising apothecaries. It possesses the large building called Apothecaries' Hall, near Blackfriars' bridge. It was originally a trades' union, but is now a scientific association, and as such publishes transactions, and has a botanic garden; it is also a recognised body, with the regulation, care, and oversight of examinations. As a commercial union, it purchases and prepares medical articles on a large scale, and sends great quantities of calomel, for example, to the colonies. Their chemical preparations are furnished to the druggists for retailing; so that the latter superintend only the mixing.

The number of general practitioners in England and Wales is reckoned at ten thousand (this estimate includes the greater part of the surgeons also). Admitting, then, that an average medical

career is twenty-five years, it follows that four hundred additional members are required yearly; and about this number are actually examined at Apothecaries' Hall. In order to become a licentiate of the society, the fee required is six guineas; and from those who intend residing in London, ten guineas. As the physicians are so few in number, and their services so dear, the general practitioners become the medical attendants of the poor, the middling classes, and even of the richest in ordinary cases. The apothecaries are not permitted to write prescriptions. After a visit they send the medicines to the patient, and, with a few recent exceptions, the latter pays only for the articles ordered, and not for the services of the attendant. Hence they have been charged with sending too much medicine, and in fact in every case of disease a new packet is furnished after the visit of the day. If they are likewise surgeons, however, they can prescribe. In the critical periods of disease they sometimes call in a regular physician, but this is seldom resorted to in the country. Sometimes the general practitioner is at once physician, surgeon, midwife, apothecary, and tradesman. Pharmacy has perhaps generally been their weakest side; it stands, in fact, lower than in France or Germany. Their chemical labours are mostly anticipated at Apothecaries' Hall, so that little more remains for them than the compounding. The mechanical character of these processes, carried on in Apothecaries' Hall, forms of itself a broad line of distinction between the condition of apothecaries and that of physicians. The former cannot be chosen hospital physicians or surgeons. Should a young man, at sixteen years or upwards, have entered as assistant in an apothecary's shop, and during or after the next five years have attended the three required winter courses and two summer courses; and should he, after this, fail in an examination, he troubles himself no farther about the apothecaries' company, as it is free for him to be druggist or chemist, and thus to sell and to practise in entire independence. Druggists and chemists are in great number over all England. Sometimes these shops are inspected by the apothecaries' company in connection with two members of the college of physicians; but, as the articles are purchased from Apothecaries' Hall, the former are in fact examining their own wares. The apothecaries in England, therefore, have gradually assumed more of the medical character, and laid aside their own; they have ceased, in fact, to be apothecaries, without becoming physicians.

From the Transactions of the Royal Medico-Chirurgical Society, acknowledged perhaps as the best collection of treatises in English medical literature, may be inferred the relative position of the three grades which have been referred to. They contain, up to the year 1832, in a series of seventeen volumes, 183 remarkable cases, and 192 memoirs, whose authors may be thus distributed according to their rank:—fellows of the college of physicians, 14; licentiates of the same, 100; surgeons, 120; army and fleet surgeons, 38; general practitioners, 67; surgeons out of London, 23.

There are some doctors of medicine who practice midwifery

exclusively, and these are held in high estimation. There is also an obstetric society in London, the object of which is to excite the medical corporations to take more cognisance of this branch of medicine. This, however, has hitherto not been effected. Midwifery is still regarded as a feminine occupation, and its cultivators are in derision termed men-midwives. There are no institutions for the instruction of females in this branch.

The two English universities of Oxford and Cambridge have for their principal objects of study the classics, mathematics, natural history, divinity, and physic. They require a term of study of eight years in Oxford, in Cambridge of ten years; of which, however, only three and a half years need be passed at the institution; and the expense amounts yearly to from £300 to £400. The course of medical study might be effective, for the facilities for the purpose are present or may be easily obtained. The number of medical students, however, is very small, on account of the restraints imposed, amounting only to a little more than twenty at each. The professors are frequently absent; the candidates have certain insignificant examinations to undergo: first to become bachelors of arts, then bachelors of physic, and then doctors. The examinations are acknowledged to be mere formalities; at the graduation frequently no one is present except the doctor and the beadle, and even the theses are not prepared by the future bachelor or doctor, but by the beadle aforesaid. Of these graduations there are about three yearly. Dr. Kidd, regius professor of physic in Oxford, said himself before the parliamentary committee, that for the obtaining of the honours there was actually no medical education needed. The general education of the candidates is not despicable, partly because they have pursued classical studies at the schools, partly because they continue these at the universities, and here at least are made to estimate the importance of science, and gain an elevated idea of moral worth and of the value of medical study and rank. Their medical knowledge, however, is gained in London, Edinburgh, Dublin, or Paris—every where, in fact, except at Oxford or Cambridge.

It is evident that the system of medical instruction in England is at this moment, in many respects, imperfect. The instruction given at the universities to physicians has become almost insignificant, and that furnished in the hospitals to the numerous surgeons and general practitioners is not sufficiently extended. Political and legal medicine are nearly prostrate; the latter has been taught in London only within twenty years, and in medico-legal cases neither the labour nor the judgment of a surgeon is duly appreciated. The number of physicians is too limited, and hence they are constantly more and more encroached upon by the general practitioners, who in general are not altogether respectable practitioners of medicine. The separation of medicine from surgery is for the most part too abrupt; the accoucheurs ought to be promoted in rank; the druggists and chemists to receive more respect; the quacks to be put down. By the external distinctions maintained, the spirit of

medicine is weakened and dissipated; the free development of medical effort is discouraged, and the welfare of the public neglected. These circumstances, therefore, require to be changed, and the desire for reform is universal. Petitions for this purpose have been directed to parliament, and among them one from the most respectable physicians of London, mostly licentiates of the college of physicians. In consequence, a committee of the former body was appointed in 1833, and still remains organised. They are styled a select committee on medical education and practice. Their president is Mr. Warburton, who first introduced the subject, and who is the father of the anatomy act which produced such general satisfaction. Warburton is a radical, but it is unnecessary to remind him that this is no anatomy bill; that the corporations are not yet dead bodies; and that, if they were, the object is not to dissect, but to revive them. In this committee there are members of the colleges of physicians and of surgeons, and other eminent men, and their published views and opinions fill several folio volumes, which were not lost, as was feared, at the late burning of parliament house. The problem of reform, however, is a very difficult one; for it is connected with the great questions of reform in England generally, with the division between the whigs and the tories, and in part with the questions upon the English church and the dissenters. But whatever may be thought of conservatism and reform, it is to be wished that the change in the system of medical affairs may be regarded as necessary in itself. Even when unanimity shall be obtained on this point; when it is acknowledged that the corporations have survived their usefulness, that abuses have crept in, that wisdom has become folly and kindness an injury; still there will be various opinions on the point, how far change is admissible, and what measures ought to be adopted to effect it.

The question of reform is the principal theme of three weekly medical journals, which have a distinct character as political publications, and, like the latter, have their "leading articles." The radical journal among these is the *Lancet*, its opponent is the conservative *London Medical Gazette*, and between the two stands the *London Medical and Surgical Journal*. The first is published by Messrs. Wakley, the second by Dr. M'Leod, the last by Dr. Ryan. The *Lancet* has been particularly prominent and conspicuous in connection with the question of reform, and likewise by the publication of the lectures of eminent teachers, who endeavoured to prevent this proceeding, but in vain, until at last an act of parliament declared such publication to be an infringement of property, and forbade it. The *Lancet* makes a business of exposing the defects of the medical establishment; of bringing to light abuses, irregularities, and faults; and, as it also introduces personalities and the private affairs of individuals, it has rendered itself by these means a very popular journal, and Mr. Wakley has gained no inconsiderable credit. He satisfies himself, however, with discovering defects and finding faults, and few suggestions of positive improve-

inent are to be found in his pages. Last year he was chosen member of parliament by a part of London, to the astonishment of many of his countrymen.

The Medical Gazette is a conservative journal; its publisher is a licentiate of the college of physicians, physician to St. George's Hospital, and known by his activity as a writer. In this journal, to say nothing of the valuable scientific contents, it is easy to recognise the elevated tone of the college of physicians. Its language is not in opposition to reform; a change of laws and institutions is acknowledged to be necessary to meet the changes of the time; but with this some regard is paid to replacing what is removed. The college of physicians has also itself made some changes lately in its own laws. The London Medical and Surgical Journal has its medical portion, calculated, like that of the *Lancet* and the *Medical Gazette*, for the use of students. All these contain very good essays, cases, and announcements of the latest discoveries in medicine, especially, among those abroad, of French medicine and surgery. The political character of the last named journal, as already observed, is neutral. Its views of reform comprise the adoption of some of the French regulations—of the *concoirs*, for example—in conferring appointments; but the *Medical Gazette* goes farther, compares and estimates the medical constitutions of more distant countries, and proposes to adopt improvements from Germany, Austria, and Prussia.

To supply the acknowledged want of a university in London, two institutions have lately been started, having distinct political and ecclesiastical characters; both having pretensions to the rank of a university, and both deserving notice in this connection for the great importance of their medical regulations.

The whig party first determined, in the double view of advancing science and of opposing the conservatives, to establish a university in London. For this end they turned to account the zeal for speculation, at that time prevailing; and, in order to encourage the approaches of dissenters, who are excluded from the two English universities, no professor of divinity was appointed. Its foundation dates from February, 1826. By issuing shares of £100 each, the holders of which are styled proprietors of the university of London, a capital was formed, and a very handsome edifice erected at the northern part of the city. A council of twenty-four proprietors takes the lead, and assembles monthly. A complete description of the plan may be found in Horn's travels. It still remains a private company, has not the power of conferring medical degrees, and does not meet all the expectations which might justly be formed of it as a university. From its admitting dissenters, apprehension has been excited among the more spiritual, that the principles of the English church would not be maintained there; and consequently it is only in those branches of science which have least concern with ecclesiastical questions—as medicine, for example—that the university begins to enjoy a certain degree of prosperity.

The medical school has at present the following teachers and courses.

LECTURES.	PROFESSORS.	DAYS AND HOURS	FEES.	
Medicine	Dr. Elliotson	daily at 8	£5 0s. and	£8
Mat. Med.	Dr. A. Thompson	5 times at 3	6 0	9
Midwifery	Dr. D. Davis	3 times at 9	5 0	7
Chemistry	Dr. Turner	daily at 10	7 0	10
Legal Medicine	Dr. A. Thompson	twice at 4½	3 0	
Anat. and Physiology	Dr. Quain and Mr. R. Q.	5 times at 2	12 0	18
Surgery	Samuel Cooper	3 times at 7	4 10	6
Botany	Dr. Lindley	3 times at 9	3 0	6
Patholog. Anatomy	Dr. Carswell	3 times at 10	3 0	
Comp. Anatomy	Dr. Grant	4 times at 3	3 0	
Veterinary Surgery	Dr. Youatt.		5 0	7

A pathological museum, already well filled, contains a collection of preparations and demonstrations by Charles Bell, who was formerly teacher at the institution, but afterward left it, and is now replaced by Carswell. A hospital, called the North London, or London University Hospital, is situated opposite the university; it is a simple building, containing at present one hundred beds, which number is soon to be increased to two hundred, and has been open since 1835. The wards, the theatre, &c., are very well adapted for use. The physicians are Drs. Elliotson, A. Thompson, Carswell; the surgeons, Cooper, Liston, and Robert Quain; the latter has lately retired. Clinical lectures are given. The principal object is to rival successfully the other hospitals and schools. For this purpose the places of house pupils and of dressers are disposed of by concours, the lectures are somewhat cheaper, and the fee for attendance on the hospitals amounts to little more than half the usual sum demanded at other institutions. With all this, however, the odium of a money speculation still remains; a share of 100*l.*, which is now still less, gives a right of property, and with it an influence in the management of the university; the institution, notwithstanding the reputation of particular teachers, has never been able to attain the highest character; and its political and religious position condemns it in the eyes of many. In view of these circumstances the conservatives and church party have likewise founded a university under the name of King's College. King's College, in like manner with the last, embraces the sciences, and has likewise displayed an especial regard to medicine. The council express their belief "that many who intend their sons for the medical profession will willingly seize an opportunity to connect themselves with an institution, which has for its leading object to educate the rising generation in the doctrines of Christianity as taught by the established church, and to implant in their minds the true principles of morality. It is expected that all who belong to the class of students of medicine of King's College will regularly attend divine service in the chapel of the college on Sunday morning."

Their new building is large and handsome, and stands on the Strand, next the east wing of Somerset House, near Waterloo Bridge. The entrance is imposing; a flight of stone steps leads to the corridor, which passes through the whole building, and is three hundred feet in length. In the middle of the corridor is the entrance to the chapel; on the two sides are ranges of apartments, on the west lie the library and the anatomical museum. The former is still small, the latter already contains four thousand pieces, mostly pathological preparations. Among them are diseases of the bones, of the joints, of the digestive apparatus, of the lungs, and of the blood-vessels, in great abundance. There are also morbid preparations of the generative and urinary organs, and the wax models are perhaps the best in London. The germ of this museum was Herbert Mayo's collection. The general lecture room is light and well fitted for hearing; the anatomical theatre and the dissecting room are in a separate building directly upon the Thames. The morning lectures are from eight to twelve o'clock; about ten o'clock short prayers are read in the chapel. Between twelve and half past one there are no lectures, in order to leave time to visit the hospitals. The last evening lecture is at eight o'clock. The price of a complete medical course is 50*l*. The students have permission to wear the academic dress, cap and cloak. They still want a special hospital, although one of the professors is attached to St. Thomas's and three to the Middlesex Hospital. Many of the students attend St. George's, Westminster, or St. Bartholomew's. It was expected to have united the new hospital at Charing Cross with the college; but this was not effected. The courses commence commonly the 1st October and terminate with the end of April. They are divided in two parts, the second commencing on the 21st of January. The students are either regular, and as such attend the courses throughout, or they attend some of them only, and are termed occasional students. The school was opened in 1833. The lectures and teachers are as follows:—

LECTURES.	PROFESSORS.	DAYS AND HOURS.	FEES.			
Medicine	Dr. F. Hawkins	3 times at 9	£3	3s.	£6	6s.
Mat. Medica	} Dr. B. Hawkins { } Dr. Gregory {	3 times at 11	3	3	6	6
Midw'y and Diseas. { of Women and Ch. }		3 times at 11	3	3	6	6
Chemistry	J. Daniel	3 times at 3	4	4	10	10
Legal Medicine	Dr. Watson	twice at 3	3	3	4	4
Anat., Physiology, { and Path. Anatom.	} H. Mayo and Partridge { } T. H. Green {	daily at 10½ and 2	8	8	18	18
Surgery		3 times at 8 P.M.	4	4	6	6
Botany	G. Burnett.	6 times at 8	4	4	6	6

A short time since, however, several of these teachers retired in consequence of some disturbances, and their places are still to be supplied.

Both universities have since been trying to obtain a royal charter. Their medical faculties are hitherto well contented if they can equal the schools of the hospitals, and have teachers sufficient in number and abilities; but the subjects of study are far too limited, if they wish to be considered as universities.

These two institutions may now be considered in reference to the question of reform. It is thought that, if a metropolitan university shall have been founded, they will come to be university colleges, and that similar colleges will be founded for the provinces also. A general examining committee, to which the three corporations are to contribute, is to confer degrees. Oxford and Cambridge, these old "great seats of learning," can, by improving their medical instruction, still maintain the pre-eminence due to their ancient fame. All must now be anxious to learn the conclusion of the parliamentary committee, and all are prepared to be astonished at the sagacity and wisdom, with which the British parliament will avoid infringing established rights while granting desired privileges. The report and plan of the committee are not expected to be forthcoming the present session (1836), but the next year a decision of parliament is anticipated on this subject of medical reform.

It may also be added, that at Easter of the present year some important changes in the laws of the College of Physicians, made by themselves, have gone into operation. At present every new applicant is first made a licentiate, and having remained such four years, can then be proposed and elected a fellow. But the conditions of becoming successively licentiate and fellow are the following. The candidate must adduce evidence of having studied, for five years, anatomy, the theory and practice of medicine, chemistry, materia medica, natural history, especially botany, midwifery, legal medicine, and the principles of surgery; he must also have attended the practice in a hospital of at least an hundred beds; and persons who have previously studied abroad, must spend one year at least in attending an English Hospital. Whoever wishes to become a fellow at the regular period, must be regularly proposed by the new established council or committee, consisting of twelve members, and must likewise have been graduated at an English university.

CHAPTER IX.

A GLANCE AT GERMANY.

Theory in German medicine—Influence of philosophy upon this and upon systems—
Natural philosophy.

When one from beyond the Rhine and from beyond the North Sea looks back upon Germany, he recognises at once a prominent peculiarity in this country. He perceives the great number of theories, and of misty theoretics, which are there found heaped up together. And as the contemplation of each object from a distance thus assists in forming a correct idea of it, the fact becomes more evident, in thus regarding them, that a cloud still hangs over Germany, the principal masses of which are indeed rolling away, but the smaller portions, still lingering, seem unwilling to follow. This cloud is our philosophical age, which indeed has given life to German medicine, but which, it must be confessed, though beneficial in its tendency, has not exerted this happy influence directly. I may perhaps be permitted, in the present chapter, to contemplate somewhat more closely the general character of German medicine, as it has shown itself for the last fifty years, then to point out how the predominance of theory has impeded its actual progress, to notice the change which has taken place in this respect, and at the same time to show plainly the influence which this predominance still exerts, in a special manner, on the branch of pathology.

As at the end of the last century our literature and science assumed a higher stand, first through the poets, afterward through the critics and philosophers, so every science took its character from these three classes. And as the most elevated and profoundest thoughts were elicited by philosophers in metaphysical researches, the feelings of the Germans were especially interested in these, and all sciences became, to a great extent, speculative. The sensible retreated before the spiritual. Even medicine felt the influence. The earlier writers and practitioners, as Stoll, P. Frank, A. G. Richter, Selle, S. G. Von Vogel, &c., had followed the path of experience, and some remained faithful to their example, even during this period of revolution. But in general, during this period, this course was condemned, and regarded as appropriate only to ordinary and weak minds.

At this favourable moment a theory came from Scotland, the well-known, and once with us fully domesticated, theory of Brown. Seldom has a doctrine been received with greater eagerness than this was seized upon in Germany. It seemed at once simple and logically exact. The interest it excited amounted to enthusiasm. Afterward, when this system had been attacked, both theoretically and on practical grounds, it fell very rapidly in general estimation. But the speculative direction was already given to the public mind, and the path, once entered, was not easily abandoned. Other

medical theories arose in succession, among which the theory of stimulus, so called, and many other dynamic views, gained especial popularity.

Meanwhile, philosophy, besides the direction given it by Kant and Fichte, assumed another form, which adapted itself easily to medicine and to natural science in general, and which appeared under the title of Schelling's Philosophy of Nature. If German medicine had been before carried away by its overweening attachment to speculation, it pursued this new path with even greater eagerness. Here was not only abstract philosophy, but an elevating comprehension of all nature, with no small admixture of poetry. A union of medicine, philosophy, and poetry, succeeded. Schelling, the founder of the philosophy of nature, stood in close connection with the romantic school, so called, of our beautiful literature, to which some of our best poets belonged, as Tieck, the two Schlegels, and Novalis. He and the school exerted an influence on each other. While this union was extending itself to various sciences, a large part of its action was exerted on medicine. Such is the evidence of history, and traces of this union may yet be perceived. Medicine, previously spiritualised, was now inspired. Apollo was doubly its divinity, both as the god of healing and as the patron of the muses. A little terrestrial matter, a little that was positive and certain out of this science of experience sufficed, and therewith the pinions of thought mounted into the ideal. One sang in physiology, another warbled in pathology. They felt the soul of the world opened to them. What was beautiful and spiritual passed also for true; the distinction vanished, the resemblance prevailed. Metaphors and figures were explanations. The eye was light, the ear sound, the brain thought. This beautiful time has passed by. Here and there are still heard some faint echoes of it, but even the most zealous adherents of these views only express them at intervals. Our own age has become prosaic. Those poetical licenses which were formerly allowed are now less admissible. It is now acknowledged that all this was a mere frenzy which had possession of the public intellect. Yet this medical romance, if regarded without reference to its application, is not without merit as poetry. It deserves a place among our classic writings, and its language, which is confessedly unintelligible to the mass, is still worth studying, if only to understand and feel its truly poetical beauty.

But if Brownism, the theory of stimulus, the philosophy of nature, and their various modifications, have had their day, something still remains of the spirit of that age which may in general be termed the ideal. The evidence, as well as the cause of its disappearance, is that it is understood. "Every age," says a late writer, "is like a sphynx; when its riddle is solved, it throws itself down headlong." At present, while we acknowledge the favourable effects which are just beginning to show themselves, we can point out several direct and indirect evils which these false views, and this striving after the ideal, have done to science. These will

be made evident by enumerating the defects which in general appear to belong to that period, and the latter may be arranged under three heads.

First, and above all, discrimination was neglected. The Germans are comprehensive, and can embrace a large part or the whole of science in one view; they love to make comparisons and find analogies, and by these very analogies they have been misled. In the comparison of several objects, there are two points to be regarded—the resemblance and the diversity. The resemblances are to be summed up, and the differences to be deducted. But at this period analogies were so eagerly sought, that even when they were extremely feeble, the effort was still made to find points of resemblance, so as to make out the general similitude. The object was synthesis rather than analysis, to assimilate more than to distinguish, to generalise than to specify. The aid of imagination was called in to perplex and mislead the judgment. Men indulged themselves, not only in comparisons, but in figurative expressions, not seeking to explain individual views, but to illustrate obscure relations. The Germans at this period were not so much philosophers as philosophical poets; and far more interested in the pursuit of intellectual beauties than of scientific truth.

Secondly, there appeared a certain contempt of material objects, or what might be termed objective forgetfulness. Speculation, which the pride of philosophers adopts as the surest path to knowledge, is in medicine to be applied with a good admixture of pure sensualism. The greatest part of our science must be found in the domain of the real, which can be recognised by the senses. The solidity and depth which have been justly ascribed to German genius, were then the solidity and depth of theory. So much did men live in the world of ideas, that the word spiritual (*geistreich*) conveyed the highest praise, and an idea was prized only for itself, and not for its truth or susceptibility of application. Structures were erected in this ideal world with a security which can now hardly be conceived; and it will become still more wonderful, how such colossal theories could be reared up on such slender facts. Physiology, chemistry, and physics, were drawn upon for facts, which, though regarded as still unproved by the cultivators of these sciences, were applied with entire confidence to others. At this time, therefore, little that was useful could be obtained from German treatises, in medical literature—little that was trustworthy, or really important.

In the third place, a nomenclature was adopted, partly in imitation of the different philosophies, and partly framed to suit the new theories of individuals. That it increased the difficulty of comprehending objects by denoting subjective ideas, was no objection. Names, in themselves derived from sources foreign to the science, were rendered more obscure by the various senses which individuals had attached to them. The custom also arose of substituting for the ancient appellations, others which were new and of difficult formation. It is especially because this fault is gradually in course

of amendment, that the French and English find themselves at length able to understand the German writers, and on this ground they may, perhaps, be excused for having hitherto remained so ignorant of their productions.

During this period, which will be yet looked upon as especially the ideal, we suffered indirect injury from the fact, that much time was lost for the enlargement of the boundaries of medicine, which meanwhile was distinctly effected in France and England. It need only be recollected how, in those countries, the doctrine of inflammation, cow-pock, pathological anatomy, itself so wide a field, cutaneous disease, auscultation and percussion, lithotomy, many new remedies, &c., became objects of discovery and of improvement. We participated fully in the advantages of these; but, engaged as we were in other directions, few original discoveries were made in Germany. We boast, indeed, of having first discovered percussion, and thought of lithotomy. If justly, it is the more to be lamented that the value of these discoveries was not better understood.

Of the various branches of medicine, surgery, ophthalmology, and midwifery, which, from their nature, are the most free, were also the most developed. Ophthalmology presents in its improvement a very remarkable phenomenon; and surgery, favoured as it was by war, elevated itself both in external rank, and internal value. It was especially pathology which suffered the greatest injury at this time, and was most impeded in its progress. It has been already observed, that this period of our medical history is now ended. The philosophical systems, from which science in general, and especially medicine, received its peculiar character, have at present lost much of their control. Medicine is now free, and advances by itself in the road of experiment, independent even of that material direction which philosophy itself, in the system of Herbart, has lately taken. Medicine now seeks to approximate more closely to the pure natural sciences. It seems probable, indeed, that, disgusted with theory, it will throw itself with increased zeal into the world of material objects. Such a change, to those acquainted with the history of medicine, will seem perfectly natural. Already a strong zeal is felt to participate in the new efforts in physiology, anatomy, and pathology. On one hand, experimental results are demanded, and conclusions based upon facts; on the other, material objects are examined with microscopic and micrometric nicety. It now remains to show, by certain examples, how much of the ideal still continues in pathology, with its defects and its disadvantages. Two examples will serve to show this; the first of which is chosen because it is new; the second, because it has acquired considerable importance.

"Comparative Ideal Pathology" is the title of a work by Charles R. Hoffmann, which appeared in 1836. Its peculiar object is to discover the normal vital phenomena, pertaining to disease, in other grades of organic life, and it directs its researches to the inferior animals, comparing the condition of man in various

diseases with that of these animals in health. The following are examples. Rheumatism is considered analogous to insects; for the essence of rheumatism consists in this, that in it the fibrous membrane, which in its normal state has the office of an insulator, withdraws itself from the control of the external skin, and, in place of this, enters into correspondence with the planetary world. Now, among animals, insects possess a fibrous envelope in place of the epidermoid. Again, in scrofula the subject is striving to develop himself in the manner of insects, by metamorphosis, for the scrofulous subject is a human larva. In rickets, the effort is to change into an invertebrate animal—into a molluscus. Dropsy consists in the degradation of the man to the rank of hydatids, &c. Thus the ideal pathology discovers a prototype of every disease in animals, and the descent of man to one of the grades below him, when affected with disease. Resemblances of diseases to plants and minerals, equally striking, may be discovered in the same manner. The author proposes, in fact, to put forth a fauna nosologica.

One system of pathology, and its teacher, are now engaging, in no small degree, the attention of the Germans. The teacher is Professor J. L. Schönlein, formerly of Würzburg, now at Zürich, and so much of his system has become known, as an unlawful and unacknowledged publication of his lectures can give, and as his converts and pupils have in various ways communicated. This system, however, has had so many and so respectable followers, that the school is neither deficient in the number, nor the name of its members. It is, indeed, not so much a doctrine as a system, and, as it calls itself, a natural system. Its advantages require no farther illustration here, and have been fully explained elsewhere. Its scientific description of diseases in place of definitions, its attention to external phenomena, especially of chemical and physical character, and in relation to pathological anatomy, and the extensive nature of the whole scheme, cannot here be dwelt upon; and as little can any judgment be offered in regard to its peculiar features. What seems to adhere to it of the already mentioned general defects of a period now elapsed, may here be pointed out. Any prejudice against this school is little to be feared; on the contrary, the disposition generally felt to favour this mode of treating pathology, is calculated to inspire a caution, lest we be carried too far by the influence of the opposite bias.

The system or school of Schönlein has little of mere speculation. It resembles the philosophy of nature so far only as that it aims to treat medicine as a natural science. Between the two, however, the distinction holds, that the philosophy of nature contemplated man in his connection with the series of organised beings, his life as part of the life of nature; and that it regarded disease as a deviation from the normal life; in short, that it saw in disease a condition. The Schönlein school sees in disease no deviation from normal life, but regards it as a peculiar life. In their view disease is, as it were, an organism by itself. Farther, the philo-

sophy of nature endeavoured to make its explanation of disease a sequel to its explanation of the general economy of nature. The Schönlein school directs its attention at once to disease itself, and seeks not to explain, but simply to describe it. It offers no definition, but, as is done in regard to organisms, gives only the description. It has its poetry, however, as well as its rival. The faithful observation and examination of a body suffering under disease, and after the disease has proved fatal; the collecting of symptoms, phenomena, and results, seem to it necessary, but still too dry or too grave in themselves. It makes, therefore, a poetical comparison; it changes disease from a condition of the body into an organism—into a plant, for example—and then observes and investigates it. Now, as this resemblance is maintained and carried out, the system thus formed is less a natural than a botanic system. In fact, diseases are divided into families and species; there are among them, phanerogama and cryptogama. We are told of relationships, of the life of disease, of its physiology, its natural history, its seeds, its geographical distribution, its imperfect forms, &c., as in botany.

It must be allowed that plants and diseases admit of a very lively comparison, and that this comparison may be carried on to a considerable extent. The greatest resemblance to plants is to be found in the accidental tissues or parasites, then in the exanthemata, and in the process of inflammation. But when such a comparison, which must always be regarded as a poetical figure, is employed as a guide in the contemplation and distribution of the whole circle of diseases, it cannot fail to happen that it will often lead to error. Here, again, appears a disregard of distinctions; and although the appearances presented are professedly kept in view, there may be a forgetfulness of facts, or an unfairness in the employment of obscure phenomena or unascertained facts, in order to build up a system. On the other hand, the language and mode of representing the subjects are attractive, although the nomenclature is harsh. But the extravagances into which one is led by this botanico-natural treating of disease, appear not only in the false premises assumed by contemplating the disease as a plant, but also in the immediate or remote consequences and conclusions. It is common in medical language to use the word germ in a figurative sense. But here we find the term so employed, as to imply that measles are actually the germ of catarrh, and scarlatina of erysipelas. Among cutaneous diseases, the impetiginous are botanically classified according to their anatomical forms. Those in which the form is imperfectly developed, are called crypto-impetiginous. The elevations of the skin in other forms, are called impetiginous fruits, and in them is distinguished the pericarp from the fruit properly so called. The form of herpes is thus described: "a common pericarp, the fruit arranged in groups, and mostly vesicular." The groups of psora are characterised as a separate fruit stalk, with fruit standing singly. It scarce need be mentioned that the analogy is far more correct, when the exanthem is not compared with the plant

itself, but with the exanthema of plants, which has lately been made familiar to us by Unger. As plants themselves have diseases, this analogy has been applied to human pathology, and we are told of the diseases of diseases, &c. Farther, as the plant has a soil on which it grows, the human body is regarded as the soil of disease. All diseases, therefore, are considered as local. As this point is very disputable in itself, it is still more open to dispute when attempted to be sustained on the ground of such a theory. This, however, need not be so much insisted on in this connection, as the important difference, especially important in its relation to therapeutics, the very object of medicine, viz. that the soil is worthless without the plant; but, in the other case, the body represents the whole value, the disease being worthless, and even a nuisance. This, too, is a distinction which completely separates the calling of the physician from the pursuit of the botanist or the naturalist. In fine, another resemblance may be set up in opposition to the above; one, unless I mistake, not alluded to by Van Helmont, that, namely, of the alimentary canal to the roots of the plant. This analogy is at once drawn from nature, poetical and just.

The Schönlein school also treat of nosology too much in conformity with their leading botanical theory. Their adherents and followers endeavour in this way to improve the science, by tracing new families and relationships, new groups and species, among diseases; and thus still botanising, they seem to be in a fair way to complete, as it were, a flora nosologica. We cannot refrain from again expressing a wish that, by their regard for pathological anatomy—by their regard for all the natural sciences, by which their attention must be especially directed to the electric affinities and to the chemical relations of the secreted fluids—their accuracy in the investigation and application of facts, perhaps with the aid of the numerical method, may be increased, and their pursuit of hypotheses and analogies gradually cease.

Above all, pathologists should once more be reminded zealously to seek after distinctions. The method in which Wichmann, in his "ideas of diagnosis," compared diseases and weighed resemblances and differences, found too few followers at the time, and may well be recommended anew. It were to be wished that medicine, which already recognises the path of experience, and that clear method of investigation by which the natural sciences obtain their great results, as peculiarly adapted to itself, may come to be one of the (so called) exact sciences. Unhappily, we must admit that its character does not justify such a hope. It still plants its foot upon sensible experience, only to rise into speculation. To extend and strengthen this basis seems to be the problem for our next age. In the business of speculation, we can easily perceive, we have already practised ourselves sufficiently. The path which surgery, ophthalmology, and midwifery now follow, and which physiology and anatomy have entered, is, thus far, least frequented by pathology. In this branch we still perceive an obstinate attachment to dogmatism, a confidence in subjective knowledge, which

contrasts more and more remarkably with the progress of other branches of medicine, and of its auxiliary sciences. A spirited adoption of the true method of enquiry seems in fact to form, in regard to rational pathology, the business of the coming age.

CHAPTER X.

SOME FARTHER COMPARISONS.

The Germans unquestionably take the lead in the following branches: the management of schools and universities, political medicine, legal medicine, midwifery, ophthalmology.

There are above thirty medical journals in Germany, in France above twenty, in England less than twenty.

John Hunter may be compared with Shakspeare. Both were self-taught—both represented nature in her true guise, on their respective theatres, and both are the subjects of endless commentaries.

The knowledge of the scientific condition of other countries is much less in France and England than in Germany. In this respect the French exhibit a harmless ignorance, but the English often a prejudiced and injurious indifference. In both countries it is the rising generation which makes the principal effort to obtain some knowledge of foreign medicine.

In France, English medicine is at least better understood than German; in England, French better than German; in Germany, French and English medicine are understood about equally well.

In England, German medicine is somewhat better understood than in France. The English are fast taking more interest in the medical science of other countries. They have a certain dim respect for the Germans, principally because they are not willing to judge of that which is not sufficiently known to them. They find their language hard—their mode of writing and their theories still harder.

In England, hospitals and their wards first served as sources of instruction, and theoretical lectures were added afterwards. In Germany, theoretical lectures at the universities were first instituted, and practical instruction by means of hospitals followed.

A Frenchman and an Englishman, it is said, were once discussing a medical question. When the former had explained his proposition at some length, he enquired whether the latter admitted it. The other replied that he had, from the commencement, considered all this as already established.

The character of physician is most respected in England, and especially in London, if the title be limited to the members of the College of Physicians. For whatever is valuable in itself becomes augmented in value by becoming rare. On the other hand, the

general practitioners, although they have so considerably raised themselves in general estimation, stand lower in this respect than the German and French practitioners. Medical worth is like medical weights—it stands nearly on a par in all countries.

It is found that distinguished theorists may be good practitioners, notwithstanding their character as theorists. As examples of this may be cited Boerhaave, Cullen, Fr. Hoffmann, and the philosophers of nature. We remark in these cases a wide chasm between their theory and their practice. Theorists also may be good practitioners, because they are theorists. It is generally the adherents and pupils who make the connection awkwardly prominent, and thus destroy by union what can only stand separately. This explains how the dogmatic Germans may at the same time be the best practical physicians.

One who wished to detect and expose general faults might say, the French physician thinks more of the disease than the patient; the English, more of some other case in his experience than that before him; while the Germans hold the correct doctrine which Hufeland thus expresses—"generalise the disease and individualise the patient." The French generalise the patient, the English individualise the disease.

Much is said at present of a universal literature, and of melting down the differences in the medical practice of different countries. Nations are indeed advancing toward each other, but climates meanwhile remain unaltered.

THE END.

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